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ABSTRACT

A handbook for University of California, Los Angeles, (UCLA) teaching assistants is provided compiled from materials developed at UCLA and other college teaching programs. Separate sections cover: teaching roles, meeting the first class, leading sections, teaching one's own course, motivating students, teaching tips, preparing examinations, student writing, cheating and plagiarism, grading using audiovisual aids, problem-solving techniques, and advice and referrals to help students solve academic and personal problems. For each of six teacher roles (e.g., expert socializing agent), a chart specifies goals, characteristic skills, and major sources of student motivation and fear. Suggestions are provided on leading discussion, laboratory, and foreign language sections, including attitudes and preparation by teachers and students. Construction of recognition (objective), recall, and subjective tests is addressed, along with criteria for grading student essays, writing anxiety, and issues concerning grading versus evaluation. Suggestions for preparing slides are offered, and advantages and disadvantages of the following types of audiovisuals are identified: slides, filmstrips, overhead transparencies, 16mm films, videos, and computers. Specific UCLA instructional media services are also described. (SW)

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TEACHING TIPS FOR TAs

A Sourcebook of Suggestions and Guidelines for Teaching Assistants

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The materials in the Special Collection on the Training of Teaching Assistants were developed through the active efforts of numerous educators who first met at the 1986 National Conference on the Institutional Responsibilities and Responses in the Employment and Education of Teaching Assistants held at the Ohio State University. Assisted by more than 80 individuals, the committee chairs listed below were able to establish the collection which will be developed and maintained by the ERIC Clearinghouse for Higher Education. This arrangement will enable faculty members, faculty developers, administrators, TA supervisors, and graduate teaching assistants to have access to TA training materials produced by institutions across the nation.

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OFFICE OF INSTRUCTIONAL DEVELOPMENT
TA TRAINING PROGRAM
LOS ANGELES, CALIFORNIA 90024

September, 1987

Dear TA Consultants and Teaching Assistants:

TEACHING TIPS FOR TAs is a compilation of materials directed toward the multifarious activities of teaching assistants. It contains a wide variety of pragmatic suggestions for first-time university instructors. They include ideas for problem-solving, examination construction, student motivation, audio-visual equipment use, and a host of others. Materials developed by faculty, staff, and TAs at UCLA over the years serve as the core of this sourcebook, but ideas from other University of California campuses and teaching programs across the country have been adapted for inclusion. Outside sources which have been quoted or used for background information include the Department of English at the University of Michigan, the University of California, Davis TA TRAINING HANDBOOK, the Center for Faculty Evaluation and Development in Higher Education at Kansas State University, TEACHING TIPS by Wilbert J. McKeachie, SYSTEMATIC INSTRUCTION by James Popham and Eva Baker, and ASSIGNING COURSE GRADES by the Office of Instructional Resources at the University of Illinois, Urbana-Champaign.

Please direct all comments and suggestions to the TA Training Program in 80 Powell at 825-9269. We hope this sourcebook will be useful to you as you explore ways to improve your teaching.

David Unruh
Coordinator for TA Training
Office of Instructional Development

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TEACHING ROLES*

The Teacher's Role	Major Goals	Characteristic Skills	Major Source of Student Motivation (and Fear)
Expert	To transmit information, the concepts and perspectives of the field	Listening, scholarly preparation, class organization and presentation of material: answering questions	Curiosity, need for achievement; intrinsic interest in content (fear of being/appearing stupid: fear of being snowed
Formal Authority	To set goals and procedures for reaching goals	Defining structure, and standards of excellence; evaluating performance	Dependency; getting a good grade (fear of flunking, of being lost and pursuing irrelevant activities)
Socializing agent	To clarify goals and career paths beyond the course; to prepare students for these	Clarifying rewards and demands of the major, the field, and academic	Need to clarify one's interests and calling; desire to be "in" (fear of being rejected by field or having options reduced)
Facilitator	To promote creativity and growth in student's own terms; to help overcome obstacles to learning	Bringing students out, sharpening their awareness of their interests and skills; to use insight and problem solving to help students reach goals, avoid blocks	Self-discovery and clarification to grow in desired direction (fear of being/becoming a puppet or grade-grubber; fear of not developing a clear and useful identity)
Ego ideal	To convey the excitement and value of intellectual inquiry in a given field of study	Demonstrating the ultimate worthwhileness of, or personal commitment to one's material/educational goals	The desire to be turned on; the desire for a model, a personification of one's ideals (fear of being bored, unmoved, and cynical)

Person	To convey the full range of human needs and skills relevant to and sustained by one's intellectual activity; to be validated by as a human being; to validate the student	Being self-revealing in ways which clarify one's totality beyond the task at hand; being trustworthy and warm enough to encourage students to be open as well	The desire to be known as more than a student; the desire to have one's life cohere (the fear of being ignored or treated as a "product")

MEETING THE FIRST CLASS

Q. I'm really nervous. How do I deal with that?

A. It's OK and normal to feel that way. You might find that admitting it to your students right away helps normalize the situation.

-- Take a deep breath before beginning to speak and let it out slowly and repeat whenever you feel panicky.

-- Slow down the rate at which you are speaking.

-- Practice positive feelings. Imagine ahead of time how you might feel having all eyes on you. Attune yourself to where you feel tense and nervous and concentrate on relaxing those parts of your body.

-- Most importantly, shift the focus of your attention. Concentrate on what you want to get across, instead of how you are saying it or how you appear.

-- Nervousness is only one small step from positive excitement. Enjoy the adrenaline flow!

Q. How do I begin?

A. With introductions--they set the tone of your section for the rest of the quarter.

-- If you begin by introducing yourself, repeat the intro at the end for the benefit of late-comers. Write your name on the board. As you go around the room, ask for names, departments, city of origin, and why each is in the course (expectations). Gauge your time. Remember that they are nervous, too.

- Locate each name on your attendance sheet and record it before letting them continue with their introductions.
- Make a point of learning names as soon as possible. You may want to use mnemonic devices.

-- Write on the board: your name, office number and hour (explain that office hour means no appointment necessary), telephone number of department where message can be left.

Q. How do I communicate my expectations of them?

A. -- First be sure of them yourself. Check with the professor with whom you are working. Come into section prepared with a list of points to be made, policies to be announced on issues, and concerns:

- How will the final grade be determined? How much weight will be given to midterm exam, paper, final exam, discussion section?
- Is attendance required for the course? Will attendance always be recorded in section?
- Have the exam formats been decided?
- What is the required reading, the reserve reading? Are texts available now in the bookstore?
- What are the policies on make-up exams, late

papers, plagiarism (see university guidelines), homework?

-- Be as clear as possible and stick by your decisions and policies once you've committed yourself unless there is some real problem.

-- Mention whether section is discussion and/or lecture and what this means.

-- Bring extra hand-outs from lecture for those who missed it.

-- Repeat any homework assignments made in lecture.

-- Ask if there are any questions thus far and wait a second before continuing.

-- Ask to see anyone with registration problems immediately after class rather than taking class time.

- Be familiar with "the computer" and how registration happens (e.g. being registered in lecture does not enroll you in a section, but registration in a section does automatically enroll you in the lecture). Check with your department.
- Decide ahead of time whether you want to issue special "Permission to Enroll" if your section is closed.

-- Briefly sketch the kind of material to be presented in your section and the course--by chronology, geography, etc. Describe where the course stands within the department (prerequisites?).

-- Explain why you, as a graduate student are excited by the course material or the subject generally. Such feelings can be contagious.

Q. How do I get them to talk the first day?

A. -- Ask a question which has many answers (i.e. interpretations). Then go around the room and solicit responses. Allow a "Pass" from those who wish and don't dwell on them. Have them repeat their names before answering.

AN AGENDA

1. Arrive early and begin to get to know your students (i.e. make "small talk"). This will help you to relax and help your students get to know that you are a student yourself.

2. Allow a little extra time for the "lost."

3. Let them know that you are not infallible.

4. Let them know that you are open to suggestions for improving your teaching ability--you are there to learn how to teach, and in this respect, your students can be your teachers.

5. Let your students know that you are organized; give them a handout with some type of information detailing any basic information they will need for your class. Your handout might include the following bits of information:

a. Your name (as you want to be called)
b. Office number and office hours (be sure to invite them in)
c. The name of the course and its number
d. The times and locations of other meetings of the class
e. The professor's name, office, and hours
f. Your office, and perhaps home, phone number (use discretion)
g. The text for the course and suggested readings
h. The number of exams, approximate dates, nature of exams, etc.
i. Information about regular homework assignments, lab reports, language labs, etc.
j. Information about term papers or class projects
k. A breakdown of how various aspects of the class influence the final grade.
l. The time and date of the final exam
m. Whether the class notes are available
n. Whatever else seems useful to the students

6. Prepare for predictable enrollment problems and procedures. If there is a waiting list, give your students an idea of their chance of getting into the course and the criteria used to "bump" excess students.

7. Give them an idea of what the course is going to be like, how hard they will have to work, and how they can do well in the course and make it an enjoyable experience.

LEADING SECTIONS: DISCUSSIONS, LABS, AND FOREIGN LANGUAGE

Leading an exciting and instructive discussion group is a challenge for many teaching assistants. Though they usually know what they want to have happen in the classroom, it is not always clear how to make it take place. Discussion sections provide a situation in which the TA learns to plan for a class, and develops a sensitivity to the class' needs. Specifically, this entails initiating discussion, getting student participation, appraising group progress, asking appropriate questions, and overcoming student resistance.

If you are a laboratory TA, you will likely need a wide variety of skills including lecturing skills, demonstration/presentation skills, discussion skills, and safety skills. Despite the unique demands of leading a lab in each of the various disciplines, there are some general tips which can be provided about leading all lab sections.

For those teaching a foreign language, the amount of material to be covered each week has usually been mapped out in advance by a supervising instructor. Be sure to discuss fully with your supervisor what aspects of instruction are expected of you in terms of grammar, sentence patterning, drill instruction, language labs, and the like.

The following pages present you with a number of outlines for leading discussion, lab, and foreign language sections.

SUGGESTIONS FOR GUIDING DISCUSSIONS*

There are five important areas which a teacher sould consider before engaging in classroom discussion activities. They deal with teacher and student attitudes and preparation, and discussion attitudes in the following ways:

A. Teacher Preparation; Content, Student Information, Setting

1. **Keep up to date.** To begin with, teachers might memorize the words "read or perish." Such advice is certainly subsumed in "publish or perish," but while many teachers do not carry on extensive research activities, they must not neglect the fact that it is imperative that they keep up with their field. There is simply no way of continuing to learn without becoming intensively involved with subject matter. At the minimum, that means reading. It is important to read new materials and review past lecture notes with a view toward recalling those questions and topics which may have been the most useful in eliciting student participation.

2. **Learn about students' backgrounds and interests.** It is very important to get to know the students' interests and backgrounds in

initial sessions. The time devoted to this is not wasted. It is a way of obtaining information about students that can later be used in discussions, it increases the likelihood of students interacting with one another later (out of class as well as in), and it helps to create an atmosphere of congeniality and trust. In general, students should begin to feel comfortable in the discussion group.

3. **Start where students are "at."** A discussion can begin with a topic which students are familiar with and can therefore feel knowledgeable about. Such a topic could be one that is given in a group of study questions. The values of beginning with relatively simple questions and leading into higher order levels of questioning should be obvious. However, it does not seem to be obvious enough. Time and again, discussions fail because teachers forget to attend carefully to the needs of the class and its level of expertise. It is inappropriate to ask graduate level questions of a large undergraduate class if they have essentially no basis for understanding the constructs. Such questions only inhibit discussions and make it far less likely that students will be willing to participate in the future. There is evidence from a variety of studies dealing with learning that there are levels of learning and taxonomies of concepts. The work of Piaget (1958), Brunner (1956), and Bloom (1956) all point to the hierarchical organization of knowledge. It makes sense, therefore, that teachers would plan their questions carefully in order to successfully lead their students in a kind of Socratic progression from initial, surface levels of understanding to the kinds of evaluation, and synthesis, etc., where students are able to transfer constructs to new situations, and utilize constructions in innovative ways.

4. **Prepare the student.** This involves acquainting the students not only with what will be covered during the discussion session, but why it is important. As a result of establishing such a frame of reference, student involvement should be increased. Study guides and question, preview, etc., are all useful in this way, and are sometimes called "advance organizers." Students will be more inclined to participate when they see what the discussion is all about. In addition, the advance organizers should be used to point out relationships to students' intrinsic and extrinsic interests, thereby enabling them to see a relationship between present performance and future rewards. Discussion involves elaboration, and rather intensive participation, and topics which have little or no interest to us usually do not qualify for that description. In sum, it should be very clear in the teacher's mind what he or she is about to do in a classroom discussion. In this way he knows what he or she is going to

focus upon so that if the class "gets off the subject," the teacher can fit such digressions into the discussion rather than letting them detract from it.

5. **Arrange an appropriate physical setting, where possible.** Attention should be given to the physical setting for discussion. People find it difficult to speak to someone whom they cannot see. If the seats in a classroom face the teacher, students will talk to, or at, the teacher rather than to other students. However if students can look at one another, they will be more apt to interact with each other as opposed to the teacher only. This is a difficult problem because most of our classrooms have seating which faces the front. If the class is small enough and the chairs are not fixed, it may be possible to rearrange seating in a circle so that no one is at the focal point. Remember, though, that people are more likely to address the person across from them than those next to them. When a discussion is held in a large room, the teacher may move around the room to increase interaction. He or she may also find that sitting, rather than standing, helps students to begin to refer to one another.

6. Consider group size. These remarks apply to discussion activities in both large and small classes because discussions should not be confined to the traditional small group. Good discussions can occur in classes of all sizes. There are obviously differences in what is possible, depending on the number of students, the nature of the task, and the skills of the students. I prefer these considerations rather than any rule of thumb, such as seven plus or minus two. Such assumptions may not always hold so there is no reason for a teacher to feel that his or her class of thirty cannot hold useful discussions. Some believe that in groups of more than five students, participation by individual members falls off sharply. However, I believe that a skillful teacher <u>can</u> involve students, if not always overtly, then sympathetically. Each student need not actively participate in every session for him or her to be able to feel involved.

B. **Teacher Preparation: Grading Standards**

Grading standards are a very important part of encouraging participation. I believe that they should not establish an overly competitive atmosphere in the class. Evidence of the dysfunctional effects of a competitive atmosphere is provided by Haines and McKeachie (1967). In a study using discussion groups in relation to grading policies, they sought to determine if a competitive atmosphere would motivate students to devote more energy to school work. On the contrary, they found that "competition, in particular a competitive grading policy, arouses tension in an individual...

> The present research demonstrated that students in competitive discussion situations became more anxious, displayed a greater incidence of self-oriented needs, and found themselves losing self-assurance. Further, they were less able to perform effectively in recitation and they became dissatisfied with the discussion procedure. When the discussion was structured cooperatively, students felt less tense, displayed more task-oriented behaviour, worked more effectively, and enjoyed the discussion (p. 390).

One of the best ways of discouraging contributions in a discussion is to establish a grading policy based entirely on the frequency of participation and/or of the relative merit of it. Such a policy makes participation dangerous to students, for they may feel that should they not get exactly the right answer, or should they not talk enough, they will be penalized. On the other hand, if they do give right answers or talk a lot, they may be seen by their peers as hogging the conversation or trying to gain points through sheer quantity of participation. I believe that there should be minimal evaluation made of the quality of contributions or their length. In this way, the teacher says to students that he or she encourages them to participate when they feel that they have something to contribute, but they do not feel pressed to do so. In a way, the teacher is asking the students to feel free to expose their ignorance and to even fail occasionally. I do not suggest that discussions should not be evaluated, but I do believe that there should be a feeling that, while students are expected to be prepared, their participation on any one day will not be "counted heavily."

On matters of opinion and conjecture, it is vital that the teacher convey an open, accepting attitude about student contributions. If students feel that what they say as opposed to how they say it or how they participate is going to determine their evaluation, they may merely parrot what they think the TA would like to hear them say. The result is an evnironment precluding much intellectual advancement for anyone. In a way, teachers should set up grading standards so that the opinions that students share could not, in any way, have any bearing on their achievement.

In addition to not basing a class grade entirely upon the amount or quality of discussion, the instructor may find it useful to discuss the situation with students in an open and frank manner. If they are aware of some of the difficulties of assessing understanding through discussion groups, they may realize the quandary which a teacher faces. Together, the class may even be able to work out some innovative grading program. It is possible to take a different alternative by looking at the situation in a more positive manner. That

is to say, the instructor may be able to set no expectations through a grading system of policies, etc., but obtain the desired amount of participation through his or her own efforts. By means discussed below and previous to this question, it seems that it should be possible to establish a climate of acceptance and openness to discussion. Further, in his or her individual actions, the teacher can do a great deal towards ensuring that every student has the opportunity to contribute.

C. **Student Preparation**

Complementing the teacher's preparation must be preparation on the student's part before the discussion. The teacher may increase the likelihood of such preparation in several ways.

He or she should make sure that there are adequate copies of the materials to be read by the students. Sources for such materials include the bookstore, the library, and reserve lists. On occasion, a teacher may find it necessary to photocopy a limited number of copies for students, keeping in mind of course, the new Copyright Law. Teachers should make student access to materials easy and practical--thereby increasing the quality of their pre-class preparation.

D. **Interaction Skills**

To begin with, there is the need to be "responsive." This involves the ability to listen carefully to what students say and to respond in an appropriate, cognitive, and affective manner. Responsiveness in verbal interactions reflects the teacher's concern for establishing a reciprocal encounter or dialogue with students. The ultimate hope is that increased involvement in dialogue may increase students' opportunities to diagnose and respond to learning problems. As a teaching skill, responsiveness should also generate complementary student behavior. As students perceive a teacher's willingness to listen and respond appropriately to their contributions, students should be more receptive and responsive to the teacher's contributions. Responsiveness can be divided into specific skills of listening and response appropriateness, as described below.

1. **Listen.** Listening is primarily a technical skill, entailing concentration by the teacher on verbal statements of the students so that the main points of a communication are understood. The teacher should attend carefully to what he or she hears the student saying. He or she listens primarily for cognitive content but also attunes himself or herself to cues about the student's feeling and attitudes since these presumably also affect the instructional process. The teacher who listens carefully should thus be able to retain both explicit and implicit content and to summarize the essential

meaning of a student's communication.

2. **Respond appropriately.** During the time between a student's comment and the teacher's response, the teacher should assess the comment and decide what reply might help the student to understand the concepts being discussed. To respond appropriately, the teacher must listen both to the content and intent of a student's comments and questions for cues as to what tack should be taken to help the student increase his or her understanding.

Taken together, appropriate listening and response behavior can be defined as showing observable concentration on the content and intent of student verbal behavior, followed by a verbal reply which demonstrates some effort to understand and reply to the explicit and implicit meaning of the student's comment or question. The response of the teacher may be an answer, a question, an elaboration, or a reinterpretation of his or her previous statment or question. A teacher may even stop group discussion to give students more background information by means of a short lecture. Finally, classroom responsiveness should be a goal for students as well. Responsiveness has been extensively treated by those involved with the Taxonomy of Educational Objectives project. In the report of the committee's work on the affective domain (Kratwohl, et al, 1964), two of the five categories are entitled "Receiving" and "Responding."

Responsiveness in question and answer periods is particularly important, and yet, difficult to attain because students often find it difficult, even when given time, to express themselves adequately. The instructor can be of great assistance here by encouraging them to continue their attempt. Such phrases as "That is an interesting idea; can you tell us more?" or "I think you have the right idea, can you tell us how you arrived at this viewpoint?" may provide such encouragement. Helping students to clarify their reasoning may relieve them of awkward moments, enhance learning for others, and encourage all to participate in the learning process.

3. **Use responsive techniques in questioning.** A teacher who attempts to be a responsive discussion leader may wish to consider the following questioning techniques for enhancing his or her discussions' personal academic value for students.

a. **Pausing.** When questions are asked, the instructor would allow the class to pause for a few minutes of reflection before asking for responses. Sieber's (1968) work suggests the value of this procedure, especially where there are several alternative responses, because "The number of alternatives under consideration and the degree of unsureness experienced are highly correlated; i.e. the more

choice alternatives persons consider, the more uncertainty they tend to experience" (Driscoll and Lanzetta, 1965, as cited in Sieber, 1968). Thus, for productive contemplation to occur, the students must be given enough time. However, the logic of this assumption must escape many teachers, for the length of time between a teacher question and a student response is usually only several seconds. Not minutes, but seconds. Yet the role of the instructor here is not that of a lecturer; he should not dominate the conversation even though it is difficult not to, given his greater knowledge. Teachers who wish to display only their knowledge should schedule the class in an amphitheatre and devote their time to lecturing.

b. **Monitoring**. If an instructor is concerned that he or she dominates a class discussion, some simple monitoring techniques can assist him or her in modifying behavior. Using a video or audio tape replay of a class discussion can be very revealing by pointing out the time logged "on offense" by the instructor. If recording is not available, a student can be asked to remain apart from the discussion and to make a tally mark on a sheet of paper beside the name of the instructor each time he or she speaks. Marks are also made for each student contributor. The instructor may set a goal for himself or herself, e.g. one instructor tally to six for students. The results of the first few days are likely to reveal how the discussion is dominated by one person and make the instructor increasingly sensitive to his or her role in the calssroom. The number of tally marks for the instructor should steadily decrease as he or she becomes more responsive. Such feedback techniques can also show how instructors' responses to students have emotional as well as pedagogical impact. A review of research on the "ripple effect" in the classroom by Kounin, Gump and Ryans (1961) supports this idea by pointing to the negative effects of teacher responses. For example, the teacher's control of a deviant student ripples through and affects the entire group. A study of university students showed that students who witness teacher punitive measures toward a tardy student rated the instructors less helpful, less likeable, less fair and more authoritarian than did students who viewed supportive actions in a similar situation.

Of course, even with the aid of a responsive discussion technique, a positive discussion climate is sometimes difficult and, in some cases, impossible to attain. A few precocious, highly verbal students can intimidate the rest of a class (and often, the instructor), making productive communication among students impossible. The task is difficult because it forces the teacher to carefully examine his or her own personality, shortcomings in character, and defensive

mechanisms--all of which are the product of a lifetime of experiences. For some college professors, such analysis and adjustment is impossible. Sensitivity, openness, and unbiased acceptance of others are underlying traits of teachers that cannot be acquired easily. For example, although there is evidence that the teacher who can laugh at himself or the topic creates a climate which is conducive to class interaction, humor cannot be forced, and the instructor who works at being funny is easily detected. Of course, humor by itself should not be taken as a sign of a good discussion leader, as it is only one form of evidence of a teacher's concern for and interest in his students and their cognitive and personal growth. An instructor's use of belittling sarcasm would certainly not be a sign of such concern.

4. **Use a variety of activities and gestures.** Discussion leaders should vary the stimulus from time to time by walking around the room, taking short breaks, or by using the board to summarize points, especially those that can be divided into pros and cons. Visuals are also a very good way of reinforcing understanding. Hand and facial gestures may be used to highlight points, to invite further discussion, to question an answer (quizzical look), etc. Gestures may include such behaviors as raising eyebrows, frowning, nodding, smiling, motioning with the finger, assuming the "thinker" pose, shaking the head, scratching the head, folding arms, tugging an ear and looking at the ceiling, etc.

5. **Use of silence.** One of the most important aspects of discussion groups has to do with the absence of input--the use of silence, or as some call it, "wait time." To be blunt, teachers should learn to keep their mouths shut. Unfortunately, in American education, silence is somehow threatening to most teachers. We are tempted to jump in after a short time following a question, to fill the silence. As mentioned earlier, Bellack (1966) found in essence that teachers talk a great deal in discussion groups. There have been many studies to this effect, each indicating that the percentage of teacher talk is quite high, usually ranging from 60 to 90 percent.

As a nation, we seem to abhor silence in verbal interaction. Thus, even after asking a high level question, we tend to forget that a high level response may take more than a few seconds of contemplation and construction. It is a very difficult skill to learn. The use of gestures, both facial, hand, and even body, is a promising antidote to the problem. If we can focus our attention on eliciting further comments from students with inviting waves of the hand, or puzzled looks in our eyes, or a nodded head, or a thoughtful expression while the student is speaking, these will both

invite the student to continue, and keep us from beginning to talk. Obviously then, that skill of silence in a classroom is integrally related with skill or use of gestures. In fact, it may be difficult for us to avoid gestures while still maintaining silence. The initial use of gestures to encourage greater participation by students in discussion may seem awkward and strained and even somewhat theatrical to us. We are not used to such hyperbole. However, most of us do have facial and other physical mannerisms in our classes and we may be able to initially adapt some of them or to utilize them to a greater extent as a way of learning to use the skill.

DISCUSSION STRATEGIES AND IDEA ITEMS: A CLOSER LOOK

With these overall strategies as a baseline expectation, focus can be turned to several of the IDEA items which embody these strategies. In addition, there are particular aspects of the skills which deserve mention here. The IDEA items are as follows:

Promoting teacher/student discussion, as opposed to mere responses to questions.

Particularly useful here is the notion of asking open-ended questions. One may ask questions that have more than one answer (e.g. "How many ways?" instead of "What is the best way?"). Students can be asked how they "feel" about the topic, not what they "know" about it. The answer may be the same in either case, but the question may seem less threatening and, therefore, lead to greater student participation. If a person is to learn, he or she must become involved. Questions which encourage and invite involvement are a key part of responsive pedagogy.

Occasionally, teachers may ask questions for which they do not have the answer. Even if they think they have the appropriate answer, the question can be stated as a hypothesis or a hunch. Instructors will gain respect, not lose it, from occasionally admitting they do not know all of the answers. Furthermore, with the help of the class he or she may arrive at the correct answer or a consensus. In so doing, instructors might even learn something from their students.

Finding ways to help students answer their own questions.

The existence of this item reflects the sad fact that teachers oftentimes do not allow students to answer their own questions. Apparently, we have forgotten the lessons involved in Socrates' dialogue with the slave Meno. You may recall that Socrates, in his very patient way, helped the slave answer most of his own questions in a way that led to greater breadth and depth of understanding. In a similar manner, it would be wonderful if each of our

students' questions could be explored as they deserve to be by instructors sensitive to their need to do so. Such involvement might bring about not only greater understanding, but greater commitment as well. Several skills are relevant here:

1. **Rephrasing.** It is helpful at times to rephrase questions for students. This may help them see the problem in a new perspective, and thereby allow them to answer their own questions. Greater understanding and experience allow the teacher to see things as students cannot see them. An instructor should have the empathy to be able to recall what it was like to be faced with a difficult question and not to be able to analyze it because of a simple yet profound conceptual block. This can be done through the use of such phrases as "Have you considered...?" or "That is a difficult question. It helps me to think of it in the following way..."

2. **Be understanding.** It is important for the instructor to show his or her empathy for the student's difficulty. It lets the student know that it is a very natural thing to encounter problems. This can also be reinforced when the instructor is willing to show his or her lack of understanding.

3. **Trouble shooting.** At times it is useful to use the blackboard or some other visual means to chart the possible variables associated with an area of difficulty. This may lead to a student's discovering his or her own lack of understanding or misunderstanding, and also gives the class as a whole an opportunity to work through the problem. In many cases, more than one student will have the same difficulty. Thus, in responding to the question the teacher might indicate that it is a "question that frequently arises and a good one." This helps to put at ease not only the person asking the question but the whole group as well. It also helps to draw the group into the deliberation process.

Encouraging students to express themselves freely and openly.

There are several other ways of creating an atmosphere of encouragement for student discussion.

1. **Physical setting.** As discussed earlier, teachers can arrange classroom seating to make their seating and position unobtrusive. In a large class, a teacher can move his or her chair to the side of the room. Some class sessions might be held on neutral turf such as the student union or even student dorms. Students often enjoy being invited to the professor's home for a class. It adds a nice personal touch to the class and, I believe, encourages personal interaction and therefore increased participation in discussion groups. Obviously, this can be done only with small classes!

2. **Overviews.** Another technique is to have students begin a discussion with overviews, questions, etc. To go a step further, there is no reason that discussions cannot be occasionally turned entirely over to students for their leadership. Usually this kind of activity would take some prior work with students outside of class--individually or in small groups.

3. **Eye contact.** Another technique to encourage students is to avoid looking directly at a student speaker while he or she answers a question or contributes to a discussion. Such behavior inclines the speaker to look at the other students and not at the teacher. Again, the problem here is to remove the impression of "When you finish, I, the teacher, will talk." It involves trying to end merely two-way conversations and broaden them so that students will speak to other students. This technique can be used along with gestures in an attempt to shift a conversation to a democratic group discussion. I believe that teachers should not hesitate to offer their opinion in such cases, it may indicate aloofness and also convey the opinion that every solution or contribution is as good as another. From another standpoint, because teachers encourage students to take stands on issues, they must also be willing to do so. At any rate, it is unrealistic to expect a teacher to be impartial at all times. If he or she is, students may resent or distrust such actions, knowing that neutrality is impossible because teachers do have opinions and preferences. Students depend upon them to interpret issues according to their own judgment. A nurturant discussion group will encourage all to express their opinions as colleagues engaged in exploring, refining, etc., a common topic. The discussion leader should be both moderator and participant.

Encouraging student comments even when they turn out to be incorrect or irrelevant.

To begin with, I would remind the reader of the importance of grading standards, as discussed at length earlier. Obviously, if students feel that their contributions are being continually graded, they are going to be reticent, to say the least, about speaking. They will certainly only speak when they are absolutely certain of their understanding. Unfortunately, discussion groups are a situation where people are invited to explore the frontiers of their knowledge and of the knowledge of their society. In such explorations, there are obviously going to be many blind alleys. However, it is important to explore them because they shed light on our ignorance and help us to discover the correct answers to our problems. Thus, the students should not be aware of whether each and every one of their comments is going to be considered "for the

gradebook." This is a ground rule of paramount importance.

By establishing a positive scheme of evaluation, the teacher supports a belief that there are no right answers on many issues. Every contribution is important because it may offer a unique frame of reference that is valuable to the group's quest for the true and the valuable. The idea is for students to realize that their contributions are not only encouraged but sincerely appreciated. In no sense are they to be merely tolerated.

I touch upon this at length because I believe in our society there is a kind of stigma against the initial wrong answer. Too often we construct pictures of students' overall abilities on the basis of very inadequate samples. Oftentimes such samples are drawn from their comments and questions in a discussion section and a large lecture, and/or the discussions in seminars. This stigma is particularly unfortunate because, as in the case of any social stigma, it reduces a person's life chances. Too often teachers decide, on the basis of one or two "incorrect" answers, that a student is unable to deal with a subject at higher levels. In so doing, he or she not only makes an unethical decision, but also an unrealistic pedagogical decision. We too often forget that the way in which students reach higher plateaus of learning is often through failure. If we preclude them from making mistakes, they learn to deal only with the safe knowledge which, unfortunately, usually resides at the lower ends of the taxonomy of educational objectives. Thus, it is almost a tragedy that some discussion groups end up parroting only safe information such as knowledge of facts, etc. In such groups, the resources wasted are tremendous. The success of undergraduate teaching assistants in lecture and discusson groups may reflect on this aspect in that students are often less intimidated by peers, assuming that "If I am wrong, he or she will be understanding."

The above comments do not mean that incorrect or vague contributions should not be corrected. One way of responding to an incorrect answer is to maintain a period of silence, waiting for other students to enter the conversation with a correction. The instructor can also say such things as "The question could have been phrased better," or "That was an interesting answer. Have you also thought about...?" Of course, if no one contributes a more appropriate answer, the teacher should offer it in order that the covert knowledge might be known.

It might also be mentioned here that discussions are an excellent opportunity to not only diagnose learning difficulties, but to identify the instructor's teaching inadequacies. Learning and teaching are often inherently time consuming because they are complex, meaningful

activities. More frequently than not, they do not lend themselves to "streamlining" or to a simplistic kind of efficiency--particularly those instructional activities involving the upper levels of the cognitive taxonomy. Indeed, inefficiency and mistakes are often very healthy signs. For example, "getting off the track" with probing questions can be very serendipitous. Because diversions and explanations involve all the class, they are actually efficient.

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LEADING DISCUSSION SECTIONS

"The art of discussion is the art of keeping one's mouth closed." (William Irmscher--i.e. leader should exercise "positive control")

"Though it may seem necessary to spend time with the person who (loves semantic tangles)..."But what de we mean by a (book), (chair), (desk)?' it may be better just to hit him or her with a (book), (chair), (desk), and get on with it." (Kenneth E. Eble)

1. **The ideal discussion section:**

- Each participant feels his or her ideas are worthwhile.
- Each feels some visceral excitement.
- It's an "unrehearsed" but well organized intellectural adventure that arrives somewhere.
- The governance is as by invisible strings.

The weak one:

- A few dominate, the rest are bored.
- Each has a sinking feeling.
- It's an adventure in waffling.
- The strings are only too obvious.

2. **Special talents of the good leader: questioning and responding:**

- To shape questions: open vs. closed, real vs. phony, general vs. personal: "What is Romanticism" vs. "Do you consider yourself a Romantic?"
- To persist until answers are forthcoming (often 15-20 minutes creep by before the fire is fanned).
- To guide the whole to an end: to orchestrate.
- To be responsive--enthusiasm is both a courtesy and an incentive--for all answers.
- Body language?

3. **Purposes of discussion**

Usually NOT to dispense

information--don't lecture! Research done by Wilbert McKeachie shows these outcomes:

- greater retention
- application
- problem solving
- attitude changing
- motivation for future learning

If the goal of the day's discussion is clarification, the leader may have to get more involved; otherwise, conscious effort to "student-center" the instruction is essential.

"A good discussion is good conversation, an invitation into the intellectual and moral habits appropriate to the inquiry begun in the primeval forest and extended and made more articulate as the centuries advanced." (Michael Oakeshott)

4. **Techniques for solving predictable problems**

- The slow start: Expect a period of warm-up; occasionally give a mini-exercise involving all, such as "Write a postcard describing..."
- The smart aleck: Normally ignore, respond seriously to what lies behind the question boorishly phrased.
- The compulsive talker: Let the class lay ground rules the first day of discussion including not making speeches, each person contributing something (even if for the shy it's rapt attention), keeping quibbles to a minimum
- "I don't know" responses: Respect them
- No response: Start with a smaller, even trivial question they can answer and can be interested in; lead back to larger.
- General confusion: Use blackboard; have a specific, even concrete object on hand to focus on (a piece of chalk has been used as metaphor and model for a wide range of problems). Break subject down into parts. Go from the known into the unknown.
- Sleepiness: Though naturalness is important, your own honest involvement and enthusiasm could include extending your repertoire of responses: being struck dumb, outraged, confused, etc.
- Sullen student: Engage him or her individually later.
- Incessant blocker: Promise his or her questions will be answered in course of discussion or offer temporary solution to "What's the meaning of life?"

When discussion groups gather, each member is necessarily an actor, uncontrollably acting out the part of himself, reading the lines that identify him or her, asserting his or her identity. This takes a lot of time and energy, and while it

is going on, there is little chance of anything else getting done...If it were not for such compulsive behavior by the individuals, groups would be a marvelous invention for getting collective thinking done. But there it is. We are designed, coded, it seems, to place the highest priority on being individuals...The individual is the real human treasure and only when he or she has been cultivated to full expression of his or her selfness can he or she become of full value to society.

(--paraphrased somewhat from Lewis Thomas' "On Committees" in The Medusa and the Snail, pp. 115-120.)

A FEW POSSIBLE PURPOSES FOR DISCUSSION GROUPS

1. To learn fact.
2. To share experiences.
3. To learn about skills.
4. To create ideas or objects.
5. To solve problems.
6. To increase understanding.
7. To reach a consensus.
8. To learn or practice skills.
9. To have a good time.
10. To criticize ideas or a paper.
11. To develop insights and self-understanding.
12. To demonstrate the possession of knowledge.

QUESTION BRAINSTORMING

Suppose that in a discussion section the following paragraph was one of the items you were supposed to cover. Construct some questions that you might throw out to your students to get discussion started.

> "School reading texts were also studied. It was found that the major reading series used in almost all public and private schools across the country teach that being a girl means being inferior. In these texts, boys are portrayed as being able to do so many things: they play with bats and balls, they work with chemistry sets, they do magic tricks that amaze their sisters and they show initiative and independence as they go on trips by themselves and get part-time jogs. Girls do things too: they help with the housework, bake cookies and sit and watch their brothers--that is, assuming they are present. In 144 texts studied, there were 881 stories in which the main characters were boys and only 344 in which a girl was the central figure."

SOME MAJOR SPECIES OF QUESTIONS TO BE AVOIDED (MOST OF THE TIME)

1. **Rhetorical questions:** Questions which are questions only by grammatical form, but which require no answer from the students. "And then we divide both sides by the gradient, right?"

2. **Dead-end questions:** Questions which require only a simple answer, like a "yes" or "no." "Was the fact that Mildred turned her hatred inside the major reason for her suicide?"

3. **Low-level questions:** Questions which are stuck on a low level of the hierarchy above. "What is the boiling point Fahrenheit? Centigrade? Kelvin?"

4. **Fuzzy questions:** Questions which are not specific or clear. "Who knows what else is included in this category?" "Does everybody somewhat understand the general principles?"

5. **Programmed answer questions:** The person asking the question has a specific answer in mind even though the question has more than one appropriate answer. "Why does my wife think women's liberation will lead to men's?"

6. **Put-down questions:** Questions which contain a put-down of any persons who would think of answering them. "Now that I've explained it carefully, are there any more questions?"

7. **Chameleon questions:** Questions which change the question being asked by the time they are finally asked. "What about Hutchinson? Why is he writing this? How is he writing? Would he be likely to join the mob?

8. **Ego-stroking questions:** Questions which carry an assumption of the superiority of the teacher over the students. "Can you rephrase your answer the way I would say it?"

LAB SECTIONS AND THE TA*

Preparing

Self-preparation: The most important thing you can do to ensure that your lab sessions run smoothly is to be well prepared. Your preparation, prior to the start of the quarter, should include being acquainted with the storeroom of the lab so that time won't be lost during a lab looking for necessary equipment or materials. In labs with potential for student injury you should know the location of the first aid kit, basic first aid rules, and procedures for getting emergency assistance. (Campus Police and other emergency assistance: Dial 35)

Preparation of the students:

The first day of laboratory is a time when the students expect to learn the ground rules and become familiar with the lab environment.

• Set the proper tone. Be friendly, but be firm as well. A laboratory is a structured situation, and some ground rules will be necessary.

• Announce the name and source of all the materials the students need to purchase.

• Explain in detail what preparation the students must make for each laboratory session and how they will be tested on it. List the materials available for reference such as laboratory manuals and videotapes.

• Make clear to the students why laboratories are necessary. Explain in some detail what students can expect to learn in their laboratory experience. Usually, students acquire information, hands-on experience, and skills in the laboratory setting. Most experiments are repetitions of important work done in the past which underlie basic concepts of science and therefore provide illustrations of fundamental ideas. Many times the phenomena under study are unfamiliar to the students, as they not only see an illustration of a basic concept but they also acquire an intuitive familiarity with previously unfamiliar aspects of science. Since many experiments employ contemporary technology in their execution, students also acquire skill in using standard laboratory techniques and common devices and some familiarity with data analysis. A discussion of such ideas as these may seem a statement of the obvious to the students with previous laboratory experience.

• Explain what sort of report is expected of each laboratory experiment, and when it will be due. Point out the criteria on which it will be judged. Specifically, show how raw data should be handled, how calculations should be recorded, how graphs and diagrams should be inserted, and in what forms conclusions should be listed.

• Present the overall grading policy, the policy on attendance, on makeup labs, etc. A handout summarizing these should be provided.

• Encourage collaboration with acknowledgement. Scientists often work together on problems, and their books and scientific articles reflect these collaborations in the list of authors. As a teaching assistant, you should provide ways in which students can work together; their reports should acknowledge these partnerships. Furthermore, the students may want to know if such partnerships are voluntary or required, and when partners can be changed.

Planning

Self-preparation: Know exactly what the students are supposed to learn and why they have to learn these things. Your thorough understanding of the lab material will be useful in handling student questions.

• Perform the entire experi-

ment in advance. By going through the lab yourself, you'll become familiar with some of the stumbling blocks that your students may confront and you'll know the subtler points of the coming lab. If your students have a choice of two or more experiments in a given week, you should perform each experiment from which students will be choosing.

• Be sure to perform all the computations that the students will be doing and keep a record. These numbers will provide a means of checking for obvious errors on the part of the students. If you have difficulties, consult one of the instructors or a TA who has taught the lab previously.

• Decide how to introduce the lab most effectively. Before students get underway with the day's lab, will they need you to demonstrate the procedures that they'll be following? Is a handout with written instructions in order? Do you want two students in the class to demonstrate the experiemnt to the rest of the class? Consider issues such as these before deciding how to begin a given lab. Remember, your initial introduction to the lab as the day's first activity can set the tone and motivation for the rest of the day.

• Prepare quizzes or other tests of preparation and/or performances that you expect to use in the laboratory. Be sure that they make sense in terms of the students' assigned preparation and laboratory experience.

• Consider what steps to take if students come to the laboratory unprepared and are unable to perform the experiments. Resist the temptation to do it for them.

• Determine the form of the laboratory reports; consider any departures necessary from the form used in previous experiments. Prepare any handouts or data sheets to be used in the laboratory session.

Conducting the lab

Beginning the class: Remember that a laboratory is not a lecture. Resist the temptation to talk extensively to the students as a group. It is in order, however:

• to remind the students of the purpose of each lab;

• to show students how to handle the equipment they will be using;

• to demonstrate any difficult aspects of technique;

• to emphasize the appropriate safety precautions; and

• to point out any interesting historical aspects of the experiment.

Assess whether or not students are as prepared for the lab as you expect them to be. If you've asked your students to complete some readings or activities prior the the lab, you would be wise to find out whether they have done so. You can do this in a

variety of ways, e.g. asking a few pointed questions, giving a quiz, or having students break into small groups for 10 minutes at the beginning of the lab while you circulate, asking for quesitons that students may have about their preparations.

Conducting the Class: Circulate among your students while the lab is in progress and be available to give assistance and answer questions. As a lab TA, you have an opportunity for an unusual degree of involvement with student learning. You can observe your students at work and give them help where it's needed. Don't wait for students to ask you questions since they may be a little hesitant (especially early in the quarter). Ask a few strategic questions of your own in order to figure out what students do or do not understand (e.g. "Once you plot those points on your graph, how are you going to find the best straight line through them?" or "Why do they tell you to make measurements with the current going both ways throughout the coil?"). Be aware that there is a difference between hovering around students, intimidating them, and circulating around in a friendly way letting them know that you want to interact and help. There are few other teaching situations like a lab where there are opportunities to provide individualized instruction to students. Try to show your students respect and cooperation.

Concluding the class: Reconvene as a whole class or, if that's not possible, make sure you touch base with each team working on the experiment to discuss results, answer questions, and hear student reactions to the lab. Rather than telling students what should have happened, let them tell you what did happen. If their results are at odds with what you expected, encourage students to speculate about the plausibility of their findings. Try to aid students in generalizing from their data to the concept or principle under study.

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FOREIGN LANGUAGE CLASSES AND THE TA*

Planning

Outline the material to be covered: In planning your own section, figure out in advance, on paper, how much time you plan to allot to each aspect. Creating an outline of material to be covered is an invaluable aid in helping you structure your class time for maximum effectiveness. It can be as simple as this example.

10 min. - Warm-up, announcements, go over homework.
15 min. - Drills using the subjunctive.
20 min. - Conversation using passive and reflexive verbs.
5 min. - Wrap-up, homework for tomorrow.

Writing out a timetable for yourself also helps you organize your material. If students get hung up on a particular point, a situation which inevitably happens, you will be in a better position to know what it is you will be willing to leave out and pick up the next day.

Decide on strategies: Within the syllabus, TAs are usually given latitude to develop their own teaching styles. Classroom structure, kinds of drills, types of questions, number and kind of teaching aids are all areas where you can develop skills which will help your budding career as a college language instructor. After you have outlined the material for each class, decide on how best to cover it and prepare handouts, assemble teaching aids, and the like.

Implementing What You've Planned

Beginning foreign language TAs often see their 50-minute section only as a test of their ability to cram drills and grammatical points into the heads of their students. But within the basic drills and grammar requirements lie a variety of creative approaches to instruction which can make learning easier and time spent in the classroom more fun for both TA and student. Some examples:

- Break into small groups: Small group work provides an opportunity for students to practice speaking and listening without being on public display. It also provides a chance for them to get to know one another better since people generally feel more comfortable sharing in a small-scale discussion. Small groups can be used for dialogue and homework review, for "free conversation" time, for working on projects, for almost anything. Having the class move from large to small groupings also helps break the hour into manageable time blocks, and combats boredom and "drill fatigue."

- Use devices that add interest to large group presentations: Try slides, jokes, or cartoons on the blackboard. Role-playing of dialogues and acting out simple plays enliven even a beginning language section. Use as many as possible--the more ways in which students are exposed to the language, the more they will absorb.

- Don't get so involved in covering your material that you forget to notice whether you're leaving the class behind. You might well ask, "But how can I tell?" Check for blank stares, rustling, miscellaneous coughing. Pause several times in your presentation to ask if students are following you. If you don't get a roomful of affirmative nods, start over. Assume here, as with all general questions to the class, that no acknowledgement means the same thing as, "I'm too shy to admit it, but I don't get what you're doing."

- Personalize the material: Whenever possible, develop questions, drills, and

examples that relate to students' lives. Students will be more interested in even the most routine work if they have an opportunity to share information from a personal perspective rather than deal solely with abstraction. The personal perspective helps students get to know one another which makes for a friendlier classroom.

• Use your office hours creatively. Many TAs complain that they sit passively in their offices, forlornly waiting for students to show up week after week and no one ever does. It is a good idea, at least in the beginning, for TAs to extend invitations to their offices to help instill an "office hour habit" in their students. One enterprising language TA set aside one office hour for individual consultations and another for group conversation practice. Some TAs also meet with students in the language lab during one of their "office hours," an extra which beginning students especially appreciate.

Common Pitfalls of Foreign Language Teaching

If you recognize yourself in any of the descriptions listed below, don't panic and turn in your office key. Common pitfalls are common because many people fall into them. Most pitfalls are unconscious habits and reflexes which can be broken by cultivating awareness of how you are in the classroom and monitoring the effect your behavior has on that of your students.

• Rescuing students is a common reflex of beginning TAs who think that being as helpful as possible is not only a hallmark of good teaching but also earns their students' respect and admiration. Unfortunately, neither of the above is likely to be true. A teacher who consistently "bails out" students does not help them learn to think for themselves; students unconsciously come to expect the TA to do all their work for them. They also pick up the not-so-subtle message that TA is the only on in the room with the "right answers.

• Talking too much is a habit difficult for the TA to break. One of the TA's tasks is to teach students how to speak, not to perfect the TA's own oratory prowess. The TA should not be the one doing most of the talking.

• Getting stuck in a "question rut" can easily happen without the TA's knowing it. If the TA only asks questions, then students only learn how to respond. A balanced format can be achieved by having students engage each other in conversational dyads and triads, asking and responding among themselves. Asking the same kinds of questions or using the same types of drills over and over again is just plain BORING and ends up lulling students into a stupor. Judicious use of surprise, varied drills, and attention to pace can improve even the

most uninteresting grammatical points.

- Losing your patience is a guaranteed way to block student participation and create an intimidating atmosphere in the classroom. Praise the efforts of slower students, and also encourage them to come for additional langage lab practice or office visits.

- Handling praise badly. Many TAs who have acquired fluency in a foreign language start to forget how difficult and even embarrassing their first spoken words sounded. Remember those moments when your tongue just couldn't form those new sounds? Especially for first year students, lots of encouragement--"Bueno"-"Tres bien"-"Molto bene"--can help get students speaking. It is always desirable to acknowledge a good effort or a good try. TAs should not, however, be indiscriminate in their use of praise. If everyone is praised all the time, it has the same impact as if no one were praised at all.

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TEACHING YOUR OWN COURSE

Many TAs at UCLA are responsible for teaching their own courses. However, organizing the course content is only one part of the preparation they must go through. The following handouts should be helpful in pointing out some considerations for determining and presenting class syllabi and instructional policies to students.

Determining Goals

- What do you, your supervisor, or your department want the students to get out of the class? Is the course a general requirement, a prerequisite for the major, a requirement for a number of allied fields? Can you assume any homogeneity and/or mastery of certain prerequisite skills in your incoming students?

- What are your personal goals in teaching the class?

Planning the Course Content

- How much freedom do you have?

- If the course is a prerequisite or requirement, what skills must students learn in order to deal effectively with subsequent courses?

- A traditional, radical, or eclectic approach?

Planning the Course Schedule

- How much leeway do you have in meeting the predetermined goals in a ten week period?

- Fixed vs. flexible, weekly vs. biweekly, etc. Is it clearly a <u>skills</u> course (e.g. writing, foreign language), in which the time needed for mastery of building block skills may be unpredictable? Do you want to incorporate a lot of outside materials--speakers and the media which may pose scheduling problems?

- Scheduling Constraints: Scheduling a diagnostic test or essay at the outset of the course? Allow time to do assignments. Allow yourself time to get the assignment thought out and reproduced in advance especially if it's a writing assignment. Allow yourself time to grade assignments. Can a student see his or her errors on Assignment #1 before #2 is due? Allow yourself time to return all relevant assignments before an exam. Schedule a test or paper before the drop date.

Choosing Course Materials

- Again, how much choice do you really have? Do you select your own texts? Are there relevant handouts, films, speakers, tapes, demonstrations?

- What about the probable skill level in your students?

Deciding on Course Requirements

- How many assignments, quizzes, projects, papers, exams?

- What will be the criteria used in grading?

- If you need help, consult the wisdom, syllabi, and assignments of experienced TAs, your Peer Instructor, TA Consultant, or older faculty members.

- Put these requirements in writing in the form of a formal (fixed or flexible) syllabus.

- Establish a clear late paper/homework policy.

- Be prepared to follow through on any policy about grades.

Start Preparing

- It's a good idea to prepare your lectures, questions for discussion, and the like well in advance. You'll do a better job and you'll be relaxed.

- Try to read the text (and your lecture notes) with a student's eyes. What terms/concepts/examples will be confusing? Concrete, timely, and humorous examples of key terms and concepts are worth collecting in some organized fashion. Can you compile (at least mentally) a list of helpful supplementary tests?

Meeting the First Class

- Write your name on the board.

- Be sure to have a syllabus or information sheet to pass out.

- Call the roll.

- Get to know the students. Use information (personal data) sheets, introduction games, or lunchtime meetings. Try to schedule one mandatory visit to office hours early in the term.

- The first meeting sets the tone of the class. It's okay to quiver and quake--but be firm, friendly, interested, and non-threatening.

- Consider an introductory lecture/discussion to stimulate thinking on a key concept, or to erase common misconceptions.

- Good teachers move around and use the blackboard.

Grading Policies

- Full disclosure vs. protective shield.

- Evaluating student work.

- Suspicions of cheating/ plagiarism: Make no accusations without proof; that's asking for a lawsuit. If necessary (for a final grade), give a DR (Deferred Report). Proving/combating cheating.

- Final grades: Curve or more absolute grading structure. What kinds of supervision and constraints are you subject to?

- Dealing with (inevitable) complaints: Since you're acting from a position of strength, try to be as calm and even-handed as possible. Don't be forced into making a snap decision on the spot.

Don't get involved in protracted arguments. It's often helpful to refuse to discuss greades until the day after a test or assignment is returned to the students--gives them time to cool off. Offer to give the paper to another instructor, perhaps the Peer Instructor or your supervisor, for another opinion. You need not compete with the students. To err is human; to admit a mistake swiftly and gracefully is essential for a TA.

Attitude and Demeanor In and Out of Class

- How much of an authority figure do you need to be? How much of a friend? In either case, avoid sarcasm and condescension.

- Remember: You can always loosen up, but once you've compromised your authority, any attempt to regain it will be viewed by your students as inconsistent behavior.

- Recognize your limitations--there are organizations for referrals (see "Referral Services").

Other Issues

- Dealing with problem students: the grade grubber, the wisecracker, the generally obnoxious student.

- Relations with the professor in charge, department personnel, colleagues

- Quality control/getting feedback: midterm evaluations, peer observations (you observe each other), observing professors.

- Balancing teaching with studies.

MOTIVATING STUDENTS*

Of all the elements in effective teaching, the ability to motivate students is among the most important. A university course in which students are excited both by the specific content and by the process of intellectual discovery is a powerful and gratifying experience. Conversely, a class of unmotivated students is tedious and debilitating to both teachers and students. It behooves all instructors from teaching assistants to full professors, to consider carefully what strategies they might employ in order to encourage students to take an active part in their own educational lives.

What are some things which college teachers can do to motivate students? (For a general discussion of a variety of topics in the context of motivating students, see Ericksen's 1974 book, Motivation for Learning.) Someone has commented that the trouble with what has been written about motivating students is that it's so unmotivating. Our suggestions are probably no exception, but they may have the advantage of bringing the "obvious" and "common sense" together in one place. These suggestions are based more upon the personal experiences of teachers than upon empirical data. Even where there is research, the results are rarely compelling. They are offered as food for thought, not as canons of good teaching which must be followed.

Begin Where the Students Are

- Capitalize on the students' existing interests. Find out what their majors are, why they are taking the course, etc.

- Find out what their weaknesses or difficulties are. For example, if the course has a prerequisite, give a diagnostic test early in the term so the students will know what they still remember and what they must study over again.

Establish the Relevance of the Course Material

- Relate the course to the students' interests when possible.

- If students do not see the course as relevant (often the case with required courses), spend the time to explain in detail why the course is required. Use examples of how the course may be useful in their majors and careers.

- Discuss the ways in which you find the course interesting.

- Use questions, problems, case studies, and the like, to demonstrate relevance.

Involve the Student in the Choice of What Will Be Studied

- Find out which topics are of most interest or value to the students in their perception (recognizing that they may not be the best judges).

• Include some optional or alternative units.

• Allow alternative learning methods such as lecture, discussion, independent study, and the like.

Arrange Learning Tasks at Levels Appropriate to the Abilities of Your Students

• Do not make tasks too easy nor too hard. At first it may be better to err on the side of too easy; success breeds success. Include a range of difficulty in your assignments, and even in your quizzes and exams, so that every student has a chance to experience success as well as challenge.

• Tests and grades during the course motivate more when they discover what the students have learned, not just what they don't know.

• Too intense motivation creates anxiety and interferes with learning. While you have to set realistic standards, do it in a supportive rather than threatening way. For example, if you find out that a student is far behind, don't say to the student "You're way behind," but rather, "These are the things you need to learn. How may I help?"

Reward the Students

• Give the students feedback as soon as possible. For example, return tests and papers quickly.

• Both positive and negative comments can stimulate learning, but positive comments seem to be more effective. At least, do not give only negative feedback. Praise what the student has done right; it tends to build self-confidence. This sense of inner satisfaction is often the greatest motivation.

• When giving negative feedback, make it clear that it is a comment on the particular performance, not upon the student as a person.

• Recognize sincere efforts even if the product is not the greatest. This does not suggest that students should receive grades for effort rather than learning, but praise should be given for effort as well as accomplishment.

• Since success motivates, encourage self-competition. Help students focus on their continued improvement, not just on the final criteria for the course.

• Help students set realistic goals. Failure to attain unrealistic goals can become a source of continuing disappointment and frustration.

Consider the Advantages of the "Discovery" Method

• Use the students' curiosity. Pose questions. Encourage them to suggest approaches to a problem to guess the results of an experiment, to propose a theory to explain empirical findings.

• Stress understanding more than facts. The students will remember better.

• Encourage students' initiative by leaving gaps for them to fill in, but draw their attention to the gaps and explain why you are leaving them.

• Don't use excessive direction or you may simply get blind conformance or defiance. Provide some direction and structure, however, or you may simply frustrate the students.

• Help the students evaluate their own progress. Encourage them to critique their own work, analyze their strengths, and correct weaknesses. Ultimately, we want the students to learn how to lean as well as master content and skills for the final exam.

Use Teacher-Student Interactions

• If there is to be "learning," the students will need to be involved. Keep the channels of communication open. Try to understand what students are saying, and check with them to be sure you are correct.

• The students' feelings about the teacher can be a significant help or hindrance to learning. Although college students need to learn how to learn from professors they dislike (just as adults have to work with people they dislike), fostering the students' dislike is not the strategy of choice. Learning provides enough difficulties without teachers going out of their way to create more.

• Active participation on the part of the students enhances their interest and learning.

• Take a variety of roles from active direction to reflective support.

• Provide a good model for the students to imitate--be human!

The conclusions which emerge are:

1. Motivation <u>is</u> a <u>significant</u> variable in a student's readiness and willingness to learn;

2. Students <u>are</u> curious and do have a sincere desire to know and understand;

3. These assets can be capitalized upon if the learning situation provides for successful accomplishments at a fairly consistent rate; and

4. Good teachers can do much to <u>create</u> an atmosphere where learning will be more efficient by stimulating student commitment and motivation.

--William E. Cashin
Kansas State University

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EXPLORING AN OLD ENERGY SOURCE: REFINING AND USING MOTIVATION

Too often we assume that students are like marriages: either they work or they don't. Those who don't, drop out; those who do fight on to the bitter end, thereby, gaining our respect. But students are not that resistant to change. They respond to us personally and professionally; they may even look up to us. That kind of power is rare. How we use this power will greatly affect a student's motivation to succeed in our classes. The trouble with negative reinforcement is that it is negative. It makes the class atmosphere negative, the subject's intrinsic appeal negative, and the student negative. Students may, in fact, work harder--perhaps drink harder, too--but they won't learn the most basic lesson of any university course: that <u>learning is rewarding</u>. And without that lesson, they will find it difficult to succeed in independent study, either in graduate school or in non-academic life. Curiosity dies.

This is not to say that all negative reinforcement is bad or inappropriate. Sometimes, in the oppressive heat of some dog day afternoon, the only way effectively to stimulate learning among a large number of students whom you cannot personally touch is to increase their level of tension: promise surprise quizzes at irregular intervals; relate the dismal statistics of the course's failure rate; warn them that failure means they might have to repeat the course and endure your jokes for another quarter. These tactics are quick, easy, long lasting, and they do not kill off student enthusiasm unlike severely negative reinforcement, which simply results in an "I don't care" attitude the students use to defend themselves against the pain you have inflicted.

Positive reinforcement, on the other hand, almost always works and is pleasant not only for your students but for yourself as well. This is true for two reasons: 1) any subject offers some--no matter how small--intrinsic rewards that you can help to make clear; 2) even if the intrinsic rewards of the subject dim in the glare of workloads gone nova, you as a TA can be intrinsically rewarding.

Extrinsic reward works. Students are investors and expected profits are strong reinforcers. If you explain to them early how your course fits into their collegiate program, and how it relates to their intrinsically rewarding goals (which may have little to do with your subject), they will enjoy it more because it will mean more. <u>Meaning is rewarding</u>.

But it is even possible to manipulate the intrinsic reinforcement of a subject for students who do not particularly enjoy it. It has nothing to do with <u>what</u> you teach but <u>how</u> you teach it, and TAs are eminently qualified and conveniently situated to do it superbly

well. Students have for years reported that TAs make better teachers because of their half student/half teacher status. They particularize their admiration in terms of TA concern, friendliness, and enthusiasm. A typical remark is that the TA was more "approachable" and "available" than full-time faculty.

What does this all boil down to? What specific things can we do intentionally--that TAs have been doing all along instinctively--to enhance student motivation?

First, reward success openly and immediately. This can be as simple as saying "good" to a student's correct answer, or it may be as involved as "summing up" at the end of the class what they have learned and mentioning names of the day's contributors ("... as Suzie said earlier about Shakespeare...as Carol pointed out about Thackeray...and let's remember Kirk's injunction against imitating Judith Krantz' style"). Even wrong answers can be corrected without undermining a student's dignity. If Ms. Seldon mixes up "neurosis" and "psychosis", stop to say: "I can see why they're so easy to confuse. Both entail similar kinds of psychic disturbances." Everyone needs a hug, particularly when we put ourselves on the line by offering the products of our minds for public scrutiny. TA approval ratifies the worth of the self; once your subject becomes the modus vivendi of self-enhancement, you will find students motivated to learn even more, regardless of their original interest in the topic.

Second, manipulate the difficulty of work tasks so that students succeed rather than fail. Since you now reward success, give them more opportunities to be successful. Outlaw "killer" tests; they prove nothing but your own superiority, which your students never questioned in the first place. Instead, give short quizzes often; even the "pop" quizzes discussed earlier will do (this way you combine both negative and positive reinforcement--a formidable tactic), as long as you break up the total amount of material to be learned in the quarter into smaller, more digestible bits. When students succeed, they become more motivated to study for the next harder test.

Third, the most reliable and the most reinforcing reward you can give is immediate and comprehensive feedback, even when you're telling students they are wrong. Don't simply say "No, you're wrong," or give a minus mark on a quiz. Unless students receive specific feedback delineating <u>why</u> the answer was wrong and <u>what</u> needs to be done to ensure success next time. they will despair. The hardest lesson for teachers to learn is that students <u>don't</u> know and <u>can't</u> begin to learn a subject if they are confused. They need to know where to go and how to get there. Students <u>do</u> respond to clear instructions: at minimum, they want to know

what they need to do to pass the course. Most students spend the better part of the quarter just trying to ascertain what is expected of them. If you're an English TA, returning the first graded writing assignment, write thus: "If you correct these grammar errors, clean up your paragraph structure, and stick to your thesis, you should do well in this course." Without this information, students tend to attribute their errors to their own "stupidity"; they are very willing to blame themselves for difficulties in learning because, unless specified, difficulties loom very large to the mind presently stymied by them.

Four, appeal to student interests. Once you know who's majoring in what, apply problems in your subject to something they're interested in. Use their names to do it: "Rachel, you're interested in psychology. Let's talk of Swift's manipulation of his audience through irony in terms of misreading--that is, let's define misreading as the repression of unwanted ideas and see how the essay works." This tactic not only opens the discussion up to Rachel's expertise, but it also reinforces her to apply herself more vigorously to your English course: English suddenly becomes relevant to a subject which already intrinsically motivates her. Plus, you've rewarded her publicly for having such knowledge; her contribution will come from deeper levels of the self, levels by which she defines and values herself.

Five, appear to be enthusiastic about your subject. Remember, your students are investing in themselves. No matter how much they may pretend to denigrate their education in their conversations, it is still their contribution to their own lives. If you let yourself get tired or apathetic, they will imitate you because they would not dare open themselves up to ridicule for valuing something you don't. Don't degrade this gift which they are giving to themselves; you give value to it. The most successful teachers inspire their students through example; they convert undecided majors into passionate specialists because <u>motivation is catching</u>. This doesn't mean that they or you have to be highly strung all the time, but if you do have to fake enthusiasm, do it.

This is what education is really about: it's not only having students learn outside the classroom for the rest of their lives. In the langauge of the 80s, motivation is an unlimited renewable fuel, and it's there for TAs to explore and refine.

TEACHING TIPS

Here are some ideas that may help to make your initial experiences as a TA more rewarding. Some may be obvious while others may be new to you.

1. Learn the names and faces of the students in your lab or discussion section as early as possible, and call on the students by name whenever you can. This procedure makes people feel that you regard them as individuals--not just as bodies filling desks.

2. Always maintain eye contact with the students in your group. This contact with your audience is extremely important in this culture. As George Rodman says in his book, Public Speaking: An Introduction to Message Preparation,

> Eye contact not only increases your direct contact with your audience--it also should increase their interest in you by making you more attractive. Eyes are beautiful things; much more beautiful than eyelids, foreheads, or scalps. Furthermore, and contrary to popular opinion, eye contact can be used to help you control your nervousness. Direct eye contact is a form of reality testing. The most frightening aspect of speaking is the unknown. How will the audience react? What will they think? Direct eye contact allows you to test your perception of your audience as you speak. (Holt, Rinehart & Winston, 1978, New York, p.26(4).

Be sure to look at everyone in the group, instead of just those in the front row and in the center of the room.

3. Be sure you understand a student's question before you attempt to answer it. There's no harm in asking for repetition or clarification: you would accord the same courtesy to one of your students.

4. Sometimes it's a good idea to repeat a student's question before responding to it: "The question that has been asked is..." Such a repetition is especially helpful if the question wasn't asked loudly enough for the entire class to hear it.

5. Preparing a handout with key concepts, lab procedures or vocabulary items can focus the discussion and show the students you have planned the session.

6. Using an overhead projector (OHP) to outline key concepts or lab procedures allows you to face the group while writing so you can avoid speaking to the blackboard. To save time you can also prepare the OHP transparencies before class and then simply add to them during the discussion.

7. Don't be afraid to say, "I don't know." The relationship between TAs and students at UCLA is normally informal and open. An honest response will be appreciated more than an effort to fake an answer.

HINTS TOWARD MORE SYSTEMATIC TEACHING*

Revelation of Objectives

Revealing objectives simply means informing the students of the goals of the instructional sequence. Goals are critical for a teacher for they serve as a means of evaluating the success of the course. This principle is based on evidence that learners will more effectively accomplish instructional objectives if they are clear about these goals. Because the intentions and requirements of a course are explicitly stated, students can spend their time learning rather than trying to guess what is expected of them.

This principle is employed more effectively if it is begun early in an instructional sequence. This can be done by handing out written objectives at the beginning of a course or, if these objectives are too complicated or too technical to be useful in the early stages of learning, by passing out a series of handouts. Stating objectives on a day-to-day basis is also helpful; these statements can be made formally and in writing or simply orally at the beginning of a lecture or discussion.

Perceived Purpose

Students cannot be expected to direct their wholehearted attention to a subject if they are not convinced of the importance of the material. Motivation is a significant factor in effective teaching and learning. The TA can increase students' appreciation of the subject matter in a variety of ways: by emphasizing the relevance of the subject to the students' interests and ambitions, by simply demonstrating personal enthusiasm for the material, by leading students in discussion toward their own determination of the subject's value for them.

The TA should confront the issue of motivating students very early in the course, but it should be an ongoing subject of concern in individual sessions with students.

Appropriate Practice

Giving the students the opportunity to practice proving their achievements before the final evaluation seems only fair. Often, though, students are first asked to synthesize material and condense concepts on a heavily graded exam. The principle of appropriate practice simply dictates that students should be allowed to practice without penalty the kinds of skills they will be asked to demonstrate for a grade (e.g. combining a series of ideas in a written essay, relating a critical opinion to their own understanding of a subject, giving an explication of a poem, providing definitions for important concepts in a field, working out mathematical or chemical formulas).

Knowledge of Results

Whenever possible, provisions should be made to enable the students to determine the adequacy of their responses shortly after they make them. By giving correct answers to homework, quizzes, or exams, a teacher can reduce the possibility of students internalizing incorrect responses. Correct information should be given as quickly as possible, preferably during the same class period. Clearly this kind of promptness is not always possible as in the case of exams or papers. But TAs should make a genuine effort to comment on, grade, and return even longer assignments as quickly as possible so that students can take these evaluation into account in further assignments.

Differentiated Instruction

Students bring to the classroom a wide variety of abilities, interests, and experiences. Because learning evolves most naturally and most lastingly out of individual students' backgrounds, the best kind of teaching is flexible enough to allow for different approaches to the same ends. TAs cannot be expected to tailor individual instructional sequences to accommodate every member of the class. They can, though, remain as approachable as possible for students with special educational backgrounds, talents, or handicaps; generally cultivate their own sensitivity to the problems individual students are experiencing; and try innovative, non-traditional solutions to these problems.

*For a more detailed treatment of these ideas, see W. James Popham and Eva Baker, Systematic Instruction (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970).

PRINCIPLES FOR TEACHING SKILLS: AN EXAMPLE OF TEACHING PRINCIPLES USED IN THE CLASSROOM

Most TAs at UCLA are involved in teaching skills. Learning a new language is learning a skill, as is learning a sport or a dance form. Philosophers are involved with developing analytical thinking skills. The basic tools of most disciplines are mental skills.

Below are listed a few basic principles in learning/teaching skills, comments on them, and the results in one class where these principles were applied.

1. **Skills are learned by doing, not by watching.** Plan your class so the greatest number of students do the greatest amount of practicing.

2. **Skills are learned correctly by receiving instant, correct feedback.** Make answers and solutions instantly available. When students do not get quick, correct feedback they internalize incorrect skills and facts.

3. **Break the skill down.** The more you can analyze the skill into small components, the easier it will be for you and the students to pinpoint trouble areas.

4. **Skills take time to be internalized.** Don't cover new content at the end of the course. Provide review sessions. Don't expect students to be immediately proficient, even when they DO understand. They may understand a definition and yet be slow to understand your next sentence when you use it.

5. **Communicate your goals to the students.** Tell them exactly what you expect them to learn.

6. **The better you understand the students' problems, the better you can help them.** Develop an open atmosphere so you can obtain maximum feedback from the class.

7. **Not everybody learns in the same way.** Provide alternative ways to learn: books, solutions, review sessions, groups, etc.

These principles were applied to a symbolic logic course with the following results: on the traditional, easily-standardized exam, 85% correct was the lowest "A", with about 33% of the students doing that well. Nobody ever got more than 97%. That quarter 22% of the students got 97% or better on the exam and over 60% got at least 85%.

Here are a few of the techniques (and the principles they relate to). Class Notes were done by a TA. They contained solutions to most of the homework. At times they were made available at the time the homework was assigned. Often solutions were made available to all in the class (2,3,7). (Homework was assigned, but never collected or graded.) No new work was begun the last week (4). Review sessions were held after the last class and before final exams (4,5,7). Answers to midterms were handed out to students as they left the room (2). Four midterms were held to give the students a good idea of where they were (5). When possible, the difficulty of problems on the midterm was the same as anticipated problems (or types of problems) on the final exam.

PLANNING LESSONS FOR STUDENT LEARNING

Dr. Madeline Hunter of UCLA has developed a teaching method which can help TAs structure their daily lesson plans according to what students have actually learned and what they are ready to learn:

1. **Begin with an Anticipatory Set.** Introduce the topic of your lesson indirectly through what may seem at first to be a stimulating discussion. A Biology TA who wants to lecture on how salt increases blood pressure might begin by asking students if they have ever known a stroke victim, a speed freak, or a coffee drinker in the North Campus

Facility; the instructor asks the students to describe what they think of the symptoms of each affliction and to speculate on the causes. If you're an English TA who wants to sermonize on subject-pronoun referent agreement, begin class by picking up a pen and asking "Has anyone lost their pen" four or five times in a row until someone detects your ulterior motive. Both examples do the same thing: They catch student attention, relate an academic topic to the real world, and stimulate memory (given thirty seconds, students plumb the depths of their memories and retrieve much previously learned information that will help them learn present material).

2. **State your goal.** Tell them where you're going. "Today, we're going to learn how salt affects the cardiovascular system and what eventual health problems may result from continued use of salt." When students know what the destination of their journey is, even if it's really very prosaic (e.g. Ohm's law), they will be more highly motivated to get to the end. Students "poop out" halfway through a lesson because they can't see the light at the end of the tunnel. Anyone remember this phrase? It kept an entire nation going for years during the Vietnam War.

3. **Input.** Now give the lesson. Reduce what you want them to learn into the smallest bits possible without wasting time. Remember, given a long series of things to remember on one occasion, students are likely to remember only the first few points and the last few points; the middle bits are confused, lost, or distorted. Keep the number of items low. An English TA who wants to teach the uses of the apostrophe should not tackle all of them in one day. On the first day, teach singular possessive nouns ("John Cleese's thin lips) and simple verbal contractions ("Klinger's gone") because these two items exemplify the basic rule for use of the apostrophe. Leave the complicated exceptions (plural possessives, past and future tense contractions) for later.

4. **Check for understanding.** Before going on to the next lesson, make sure your students have learned this one. Find out whether or not you have to restate the principles and review the examples; there's no sense moving on if some of the students haven't learned the materials. This can be done in several ways: ask them to write out a few examples to make sure no one's being left behind. Or put a test example on the board and "poll" the students (use thumbs up for "correct," thumbs down for "incorrect," and thumbs to the side for "none of the above/don't know"). You will know immediately what you must do. Keep working on the lesson until learning is unanimous. Why wait until next week or next month to find out that you should have repeated the lesson today?

5. **Guided practice.** Have your students do a little in-class

homework on what you've just taught while you wander around the classroom checking for understanding and answering questions. A few examples need be all that are required (as long as they completely cover the possible variations of the principle being learned), but it needs to be done right away. If students have any uncertainties or want to know how the principle just learned related to another principle they already know (perhaps even one they know incorrectly which has been causing them to make mistakes for years), you can deal with it now.

6. **Independent practice.** Have them continue the same kind of exercise you used in "Guided Practice" at home. If, for instance, you had them write five examples of apostrophes in class, ask them to write five more at home. Or ten. you're already sure they have learned the lesson correctly, but they need the reinforcing experience of being able to do it on their own without you.

Although you may be tempted to say that such a lesson plan would slow down your classes, in reality you save all that time you normally devote to correcting mistakes in areas you've already covered. How many times in a quarter do you have to repeat your lesson on comma splices? On Planck's constant? On Latin's third (and most horrible) declension? How much time do you spend correcting essays and assignments with your red pen, discovering to your chagrin that the student still writes fragments or reverses an equation? Okay, so you write a corrected version at the bottom of the page; but how do you know they will learn it this time when you're not there to check for understanding? And even if you don't cover as much of the Norton Anthology as you did last quarter, what you have covered will be learned effectively, correctly, and permanently if you use this system. Plus, you have the opportunity, in going over each item care-fully, to reinforce your students for their learning. You check to make sure they have learned it. You give them the chance to achieve a degree of independence every night. You reward learning and give them a better chance at succeeding rather than failing. Whatever you cannot cover in class will be better absorbed by more motivated students on their own. This is what education is really about: it's not only having students learn in the class-room; it's having students learn outside the classroom for the rest of their lives.

PREPARING EXAMINATIONS

Students are probably more concerned about examinations than about any other aspect of a course--and rightly so, for exams are most often the major means (if not the only means) of evaluation for the instructor. Because of the importance of grades at the university, it is vital to ensure that exams are both reliable and valid.

If an exam is well thought out, it can be a learning experience for the student as well as a successful measurement of the student's achievements. Objectives in courses vary and therefore call for different evaluation techniques. The following section looks at various types of exams and their advantages and disadvantages.

GENERAL SUGGESTIONS

The following suggestions are directed to the more common problems teachers encounter in preparing tests:

Make sure the test reinforces and evaluates the OBJECTIVES you have established for the course.

If we say our objective is to teach students to think but our tests require only rote memorization, we are neither evaluating thinking ability nor encouraging the students to indulge in it. (See Gronlund, 1970; Mager, 1962)

Decide on the PURPOSE of the test before constructing it.

If the main purpose is instructional, the test should be diagnostic--designed to help students see their strengths and weaknesses and make decisions about what needs to be done to improve. If the main purpose is mastery, the test should indicate whether the student has reached the minimum level of learning necessary to proceed. When the criterion is not met, the student would normally be expected to study further in the area before going on. If the main purpose is measurement, the test should assess how well the student does in comparison with others who took the test. Since measurement tests judge the relative standing of the student, they are usually designed to spread scores for clearer discrimination into grade categories. Of course, an instructor may choose to work toward more than one purpose; and it is hoped that all tests have some instructional value.

Make the test as VALID as possible.

Validity refers to how well the test actually measures what it was intended to measure and requires that the test be appropriate for these students and this course as taught this time! Some guidelines to consider are:

1. Attempt to give approximately the same proportional weight to each learning domain as you have in your objectives

and your teaching. Three domains of learning have been defined. (Bloom et al, 1956; Krathwohl et al, 1964; Sanders, 1966). Briefly, the cognitive domain emphasizes the mental processes, ranging from the learning of basic facts to the levels of abstract thinking; the affective domain comprises interests, attitudes, values, appreciation and individual adjustments; the psychomotor domain includes skills and physical tasks which require neuro-muscular coordination. For example, if it is important that a student be able to use certain equipment with accuracy, then a "test" should evaluate psychomotor ability as well as the student's knowledge of the necessary manipulations.

2. Balance the weighting of the levels of learning within these domains, making sure that what is asked of the student on the test is similar to what has been expected in class and/or homework assignments. For instance, if an instructor devotes almost all of the class time to the development of formulas but then constructs a test which deals chiefly with application of these formulas to research projects, it is likely that many students will <u>not</u> do well. They will have had little experience with application, and the instructor's teaching in class will not have led them to expect a test of that nature.

3. Test the various course topics in proportion to the emphasis they have received in class. Since tests only <u>sample</u> what students have learned, we often find that they have poor balance; certain topics or chapters are over or under-emphasized on the exam. If there is a deliberate attempt to do this, be sure to advise students of your intention well in advance.

4. Be cautious about using tests written by others. Textbook tests, tests prepared by outsiders, tests written for several sections of the same course, and tests written by a team of instructors have unique advantages, but they can easily be inappropriate for a particular section of a course.

5. Make every effort to assess that which has been accomplished in this course. It is impossible in some areas to avoid testing knowledge accumulated from several courses, but make sure this is not done on all tests. Secondly, be careful not to give tests which are really intelligence tests rather than achievement tests of the material learned in the course. In our attempts to write challenging questions so that our students can demonstrate their capabilities, we may require that students use the materials in ways not made explicit in the learning sessions. In such cases the students' intelligence may be a greater factor than how much has been learned in the course. Third, we must be careful about rewarding the "good" test-taker. Part of getting a good score on a test is being able to use effective test-

taking techniques, but the premium for this should be small. Such things as answers to previous questions in the items of later questions will be noted by test-wise students but not by others. It is important to avoid anything which might determine the students' scores other than their mastery of the material.

Make your tests as RELIABLE as you can.

Reliability refers to the consistency of the test's assessment; if it were possible to erase the students' memories of the test items and they could take the test again, they should obtain similar scores. Anything that increases the "chance factors" in student responses or instructor scoring will lower the test's reliability. Specific suggestions which might help are:

1. Adapt a length that is appropriate for the time actually allowed for the test. Although a class period may be fifty minutes long, the test period often is less. It takes time to distribute materials and establish procedures. Rule-of-thumb guidelines suggest that students can answer about 1 recall, 1 1/2 multiple-choice, 3 true-false, or 4 matching questions per minute.

2. Work to attain a reasonable overall difficulty level as well as a difficulty level appropriate for the type of question used. The overall difficulty of an exam is important because of its impact on students--they are not as likely to feel encouraged when overall percentage scores are very low, even if the letter grades are satisfactory, i.e. "C" or higher. Also it is desirable to have some variation in the difficulty level of items. Questions should range from quite easy (to encourage students and relieve some tension at exam time) to very difficult (to challenge and identify the top students). It should be noted that items so easy that 90% of the class answer correctly or so hard that 30% or fewer answer correctly are of little value for measurement. Within this range, each item type has an optimum range--the variations due to the differing chance factors involved. The majority of items of a given type should have a difficulty level approximating the figures suggested below if the test is given for measurement purposes: recall--40-50%; multiple choice--55-70%; true-false and matching--65-80%. Items used in a mastery test often do not follow these rules since every student is expected to attain certain levels before proceeding.

3. Increase the total number of items and/or tests, if you need to enhance reliability. A modest reliability (.60-.70) on a single 50-question test can be increased to substantial reliability (.85-.95) by giving 5 or 6 such exams during a semester or quarter. There is, of course, a point of diminishing returns--one must consider carefully whether time spent

for testing might not be more valuably spent in other instructional activity. Also, poor items should never be included for the sake of length.

4. Reliability is negatively influenced by ambiguous questions; tests that are too long or too short, too hard or too easy; carelessly chosen distractors; inadequate directions; and inconsistent scoring.

A good test is STANDARDIZED--every student who takes the test should be given the same opportunity to do well.

1. The directions must be the same for everyone; all should have equal amounts of time, help, equipment, etc.

2. The test should be constructed so that the same performance will receive the same score even if scored by different graders or by the same grader at different times.

3. The test must be easily read -- written legibly and at the reading level of the students.

4. Special care should be taken to use language similar to that used during instruction -- we sometimes write a bit more formally and at a different level than we speak.

5. Organize and arrange the test lay-out to help students as much as possible -- the purpose is to test students' knowledge not their eyesight or puzzle-solving ability.

CONSTRUCTION OF SPECIFIC TYPES OF ITEMS

There are three basic categories of test items:

1. Recognition or Objective
2. Recall
3. Subjective

Recognition items include multiple-choice, true-false and matching. In all of these, students are required to select the correct response from the limited number of choices provided. These are "objective" in that the marking process is highly uniform because the key is determined in advance and the same score should be obtained no matter who grades the items.

Recall items involve fill-in-a-blank, short answer, brief one-sentence definitions or explanations, and specific lists of resources or characteristics. Little leeway is allowed in the correct response although some latitude may be allowed for synonyms or slight variations.

Subjective items include essay items and oral questions for which no one exact answer is expected. Such items are best used to assess synthesis, creativity, understanding of implications, ability to determine relationships, etc.

Every type of test item has a place in learning evaluation and serves best for certain purposes. An examination

question should be written to accomplish a specific task; thus, special care is a must when selecting the type of item to use. One has to consider the characteristics of the course content as well as the level of thinking being tested. Meeting these special needs will usually lead to writing a variety of test items.

The following discussion lists strengths and limitations as well as offers constructive suggestions -- for each general category (recognition, cognition, recall, subjective) as well as for each specific item type.

General Considerations

- Write items as you progress through the semester--writing a few after each class session is ideal.
- Write items on note cards for ease of handling and flexible use.
- Avoid writing trick items.
- Use a little humor to relieve student tension, but don't get carried away.
- Keep items as brief as possible or your test may be a speed reading test more than an achievement test.
- Use a variety of types (e.g. multiple-choice and essay) to help provide for individual differences among students.
- When using a variety of types of items, group the questions according to type so that students don't have to constantly shift response patterns.
- Do <u>not</u> use a series of questions in which answering successfully depends on knowing the correct answer to a previous item.
- Arrange items in order of difficulty; at least, use easier questions for the first few items to avoid unnecessarily discouraging students at the outset.
- Weight the number of points for a question according to the type of item and the amount of learning assessed.

Recognition Items in General

Strengths

- Can be easily and accurately scored by clerk or machine.
- Are versatile and will adapt to a wide range of content and difficulty levels.
- Are designed to assess the more specific objectives in a course.
- Can provide a comprehensive sample of course content since the response mode is simple and requires little student time.

Limitations

- May not allow students to demonstrate a range of knowledge since the response is limited to the options.

- Are difficult to write so that all students will have the same interpretation.

- Are not easily used to assess effective learning.

- Are so easily constructed to assess basic factual knowledge that instructors often fail to test higher levels of thinking.

Constructive Suggestions

- Avoid patterns in the response key. It may make scoring easier, but sharp students will "break the code."

- Avoid over-using any one response as the correct answer--using far more true than false or more "B" choices regularly gives the students a clue as to which response to bet on in a pinch. For example, McKeachie (1969: p. 134) suggests to students that instructors tend to use "B" options for the correct answer more often than other options.

- Strive to include items which test the higher levels of thinking and learning.

- Avoid such qualifying words as <u>always</u>, <u>never</u>, etc.

- Use the positive statement whenever possible.

- When necessary to use a negative statement, <u>underline</u> the negative word.

- Be careful not to give answers or clues to answers in preceding or subsequent items.

- Use a simple response method--separate answer sheets, a column of response blanks set to the side of the items, optical mark reader cards or optional scan sheets.

Multiple-Choice Items

Strengths

- Are considered to be the most versatile of all item types.

- Can be used to test level of understanding and ability to apply learning.

- Can be written to assess ability to integrate information from several sources when formulating an answer.

- Are very useful for obtaining diagnostic feedback if the incorrect alternatives are constructed to cover common errors.

- Provide an excellent basis for post-test discussion, especially if discussion includes why the incorrect responses were wrong and the correct responses were right.

Limitations

- Are difficult and time-consuming to construct well.

- May appear too discriminating (picky) to students, especially when the alternatives are well constructed.

- Are open to misinterpretation by students who read more into questions than is there.

Constructive Suggestions

- The stem should clearly present the problem or question.

- It is generally best to use direct questions rather than incomplete statements for the stem.

- Include as much of the item as possible in the stem so the alternatives can be kept short.

- In testing for definitions, it is best to use the term in the stem rather than as an option.

- The alternatives should be listed on separate lines so that all options can be clearly distinguished. Never include the options as part of a narrative along with the stem.

- All alternatives should be homogeneous in content.

- All options should be plausible responses to the stem. Do not write poor alternatives just for the sake of having more options.

- All choices should be grammatically consistent.

- Keep alternatives for an item approximately the same length.

- When composing incorrect alternatives, keep in mind the misconceptions students have indicated in class or errors commonly made by students in the past.

- Recognize that using "all of the above" and "none of the above" as alternatives will change the item to a series of true-false questions.

- Use capital letters (A,B,C,D,E) as response signs; they are not so easily confused when written as are the small letters (especially "a and d" and "c and e").

- If all items don't have the same number of alternatives, group those of equal numbers so that students do not have to constantly adjust for the pattern.

True-False Items

Strengths

- Are relatively easy to prepare since each item comes rather directly from the content.

- Offer the opportunity to write questions which cover more content than most other item types since students can respond to so many in the time allowed.

Limitations

- May not give a true estimate of the students' knowledge since 50% could be gotten correct simply by chance.

- Are very poor for diagnosing student strengths and weaknesses.

- Are generally considered to be "tricky" by students.

- Tend to be either extremely easy or extremely difficult.

Constructive Suggestions

- Use a relatively large number of items (75 or more when the entire test is T-F) since a student could correctly guess half by chance.

- Do not take statements verbatim from the text.

- Avoid negatives, especially double negatives.

- Avoid ambiguous and trick items.

- The diagnostic value of the items can be increased by having students revise all false statements to read as true ones.

- Use statements which are entirely true or entirely false--otherwise the well-informed student is often penalized.

- Avoid tip-off words: all, always, never, every, none and only usually indicate a false statement whereas generally, sometimes, usually, maybe, and often are used in true statements.

- Avoid ambiguous terms: several, seldom, frequently, etc.; use phrases like "50% of the time."

Matching Items

Strengths

- Are especially suitable for who, what, when and where questions.

- Are generally quite brief and uninvolved.

- Permit more efficient use of space when there are a number of similar types of information to be tested.

Limitations

- Seldom can be used to measure beyond recognition of basic factual knowledge.

- Are usually poor for diagnosing student strengths and weaknesses.

- Are appropriate in a limited number of situations.

Constructive Suggestions

- Include only homogeneous material in a set of matching items (i.e. do not use dates and places in the same set).

- To reduce the amount of reading, use the more involved expressions in the stems and keep the responses short and simple.

- Arrange the items in the response column in some logical order--alphabetical, numerical, chronological, etc.--so that students do not waste time searching.

- Always place an entire set of items (stems and responses) on the same page.

- Use no more than about fifteen items in one matching set.

- If responses are to be used only once, provide more responses than stems to

prevent students from using the process of elimination rather than concentrating on the answer of each question.

- It is permissible to use a response as the correct answer for more than one stem but never multiple responses for one stem.

- Number each stem for ease in later discussions.

- Use capital letters (A,B,C,D,E) for the response signs.

Recall Items

Strengths

- Are very easy to prepare.

- Use vocabulary or phrasing exactly as presented in instruction or readings.

- Are good for strictly factual information where a specific word or expression is important to know.

- Reduce guessing since they require a definite response rather than simple recognition of the correct answer.

Limitations

- Reduce objectivity in scoring unless only one word or expression is correct.

- Tend to test only rote, repetitive responses--often using the words of the text.

- May discourage the student because the task is so precise and often difficult.

- Make scoring difficult and time-consuming--often must be done by the test writer.
- Encourage a fragmented study style since memorization of bits and pieces will result in higher scores.

- Have little evidence to recommend them over other item types unless the need for specific recall is essential.

Constructive Suggestions

General

- It is best to use original questions rather than take sentences directly from the text.

- Make the statements clear and concise, leaving no question about what is to be done.

- Use vocabulary and phrasing as found in the text or as presented in class.

- Give explicit directions as to what is expected of the student and what variations will be accepted in the answers.

- It is recommended that only partial credit ever be deducted for spelling errors, omitted units on math problems, etc.

- Much more credit should be given for recall items than for T-F or Matching.

Fill-in-the-blank Items

- Word the statement to encourage a specific response.

- Never use a long quote and leave a blank every few words.

- The blank should be a one-word response--or at least a phrase of closely related words.

- Scoring can be facilitated by having students write their answers in a column to the left of the items.

- Leave out only important terms or expressions for students to fill in. Do not leave out insignificant words such as "a" or "the."

- Use "a/an" preceding blanks in order to avoid giving clues to the correct answer.

Short Answer, Definitions and Lists

- Specify the source of the item (lecture, text, etc.) so that students will have the criteria to judge their own responses.

- Indicate whether you require specific wording, paraphrasing or illustrations, etc.

- It is usually best to ask for a specific number in a list and base the credit given on that number. Asking for "5 or 6" gives the student a little margin.

- Leave enough space for the student to respond right after the question--both to help the student keep the question in mind and to give some guidance as to the length of response expected.

Subjective Items

Strengths

General

- Encourage students to strive toward understanding a concept as an integrated whole.

- Permit students to demonstrate achievement of higher level objectives--such as analyzing given conditions, contrasting and comparing, etc.

- Allow expression of both breadth and depth of learning.

- Encourage originality, creativity, and divergent thinking.

- Offer students the opportunity to use their own judgments, writing styles, and vocabularies.

- Can be written to test abilities to reason, integrate, think critically, and solve problems.

- Are less time-consuming to prepare than any other item type.

Oral items have these additional strengths

- Allow students to modify responses according to the examiner's reactions.

- Allow for further probing when an answer is not as explicit as desired by the examiner.

- Eliminate the hazard of judging an answer upon the basis of the writing skill exhibited.

- Are potentially useful with handicapped students.

Limitations

General

- Permit only a limited sampling of learning due to the time required for students to respond.

- Are not appropriate for every subject matter.

- Are not appropriate for assessing knowledge of basic facts.

- Provide students more opportunity for bluffing, rambling, and "snowing."

- Are pitfalls for students who tend to go off on tangents or misunderstand the main point of the question.

- Are very difficult and time-consuming to score.

- Are subject to biased and unreliable scoring.

- Permit ratings influenced more by organizational style, grammar, and neatness than by content of response.

Oral items have these additional limitations

- Are especially trying for students who have poor speaking skills or are anxious in verbal situations.

- Allow the examiner to be a positive or negative influence.

- Do not allow student anonymity for scoring.

- Present complicated and time-consuming scheduling problems.

- May give an advantage to later students if only one question is used and information is "leaked;" yet, multiple questions of equal difficulty are tough to produce.

Constructive Suggestions

General

- Use novel problems or material whenever possible, but make sure they relate to class learning.

- Be sure the questions are comprehensive rather than deal with small units of content.

- Be careful to present directions so that the student is perfectly clear about what needs to be done.

- Instruct students as to how to respond--plan ahead, outline before final response, distribute time cautiously, etc.

- Allow appropriate time for students to do justice to the questions.

- Provide guidelines concerning the amount of time to spend on each question as well as the length of response.

• Specify the proportional value of the questions in comparison to the total grade.

• If you prefer a particular response style (shorter responses, use of phrases rather than sentences, etc.), tell this to the students before the test.

• When dealing with controversial topics, make it clear that the task is to logically present a position rather than take a particular stand.

Specific suggestions for oral items

• It is best to develop a pool of items of about equal difficulty and comprehensiveness.

• Have more than one person answer each question.

• Use a random selection process when choosing the specific question for a student.

• Be careful not to argue with the student.

• Avoid such behavior as raising the eyebrows which might signal to the student that he's on the wrong track and should find another answer.

Scoring Suggestions

General

• Prepare, in advance, some acceptable responses--at least, list the key points you expect to be made.

Essay Items

• Grade the papers as anonymously as possible--have students put their names only on the back of the last page.

• Grade one question on all papers before proceeding to the next item.

• Before marking any paper, read through several responses to a question in order to get a general feel for the norm.

• After grading one question, shuffle the papers so that no paper is consistently scored first or last.

• Be liberal with comments, emphasizing strengths as well as weaknesses, along with suggestions for improvement.

Oral Items

• Use every possible means to avoid favoritism in your evaluation.

• After all have been examined, be sure to give the students feedback in writing--comment on strengths and weaknesses, make suggestions.

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STUDENT WRITING

When people complain about the quality of student writing, their complaints focus on two kinds of problems: students make spelling, punctuation and grammar errors; students can't organize a paper logically. Now the first of these complaints is not exactly trivial, but it is easily remedied -- if teaching personnel, professors and TAs alike, will cooperate. There is no question that expertise in English is necessary, because the teachers recognize the errors. They simply have to make clear to students that such errors will not be overlooked. Students now argue that they can't be penalized in other classes for mistakes in spelling and grammar: "this isn't an English course." But all faculty are teachers of writing if they demand writing. A united front would bring spectacular improvement in a quarter, for errors of this kind are usually produced only by carelessness and poor proofreading.

Logical organization and effective presentation, on the other hand, go to the heart of writing. These rhetorical skills are the ones demanded for successful writing in the professions. But the rewards of learning to write effectively are not superficial, not simply a matter of career advancement. Writing is a cognitive process. It does not report a pre-linguistic reality, but shapes it. It is profoundly true that you cannot tell what you think until you see it in words. Thinking is spatial, but writing is a linear and sequential medium. The imposition of this single dimension onto simultaneous ideas forces them into a relationship. If the writer is not in control of his or her organization, his or her reader will impose an order -- the wrong one, for people read with built-in expectations. So the scientific writer cannot simply record his or her facts and expect them to have the impact he or she wants. He or she must understand them, and writing provides the best method of doing so.

STUDENT WRITING: WHAT STUDENTS DON'T REALIZE

The whole process of writing is mystifying to many, if not most, students. Operating from the belief that what my students don't know can hurt them, I've offered my classes some generalizations about academic writing that most of them find surprising.

Students don't realize:

- That writers rewrite -- many times!

- That published articles are often proved wrong, unconvincing or badly written; not everything that's published (or even part of our required reading) is a model of good prose.

- That not all writing has to be the conclusion of a process; writing often

represents the writer's present position on a problem.

- That not all writing represents a creative new position on a problem.

- That university and college faculty often consult colleagues about first, second and third drafts of essays, while students almost always work in isolation from one another.

- That each field has some idiosyncratic stylistic demands with which writers should be familiar, and students can discuss these with their professors in various disciplines.

- That most writers write for a specific audience.

- That what they (students) have to say is of value.

- That writing is a revealing expression of what they have learned during the quarter.

- That criticism of their papers is not criticism of them as people.

PROPHYLACTIC ASSIGNMENTS

A pedagogical parable:

Once upon a time last year, two TAs led the discussion sections for an over-enrolled biology course. Their professor required research papers from all students, and naturally the responsibility for assigning and evaluating the essays fell upon our heroes. As we have said, the TAs had divided the horde of underclassmen as Moses the Red Sea, but even so, as the first TA scanned the vast expanse of his discussion section, he perceived that there were far too many students in his charge considering how much work of his own had to be completed that quarter. Remembering to look out for number one, knowing how many grinding hours of grading lay ahead, this TA decided to waste no more time than necessary. Accordingly, he rose up before his charges and proclaimed, "Write a four to five page library paper on something we're studying this quarter. Due tenth week." And having spoken, he returned to his research.

The second TA, a wily and worldly-wise herpetologist, equally dismayed by the overload of undergraduates, also remembered to look out for number one. And so, biting down hard on his test tube holder (no bullets being available), he dittoed an assignment sheet for his students. The sheet not only established the assignment's parameters (including sample topics) but also explained the desired format for papers and the TA's criteria for grading. After distributing this detailed assignment sheet and setting aside class time to solicit questions concerning it, the second TA returned to his research.

Came the tenth week and the flood of papers. Ironically, the first TA had to spend fully half again as much time wading through the essays as

the second TA did. In fact, the first TA almost drowned in the deluge of formless, sloppily written, undocumented essays, each on a different, often poorly defined if not chaotic, topic. The second TA received better focused, more conscientiously written essays -- and far fewer unwelcome surprises. His students had known what was expected of them. Odds are that this partially accounted for the second TA's higher student evaluation scores.

The moral: Any TA can influence greatly the quality of student writing merely by the care he or she takes in making assignments. The following suggestions for more influential assignment-making were distilled from a blend of composition texts, discussions with TAs from various departments and forty undergraduate essays written under the rubric of "My Most and Least Productive Writing Experiences."

Before you make the first assignment:

- Establish a clear policy concerning due dates and late papers.

- This may seem obvious, but especially if you are dealing with freshmen, point out that they are writing for an audience, and not merely for self-expression; that is, grades will be awarded purely on the basis of what is down on paper, not what is reputedly in their heads. Inform the student that he or she will profit from re-reading all essays to make sure that he or she has covered the material thoroughly and presented it clearly. You, too, will profit.

- Explain plagiarism and specify the sort of documentation you require on take-home papers. This may prevent much tribulation later in the quarter.

Making the assignment:

- Effective assignments possess two cardinal virtues: clarity and specificity. In large classes or exam situations expecially, any ambiguity will be exploited, any conceivable wrong turn taken. Establish firm, detailed guidelines for both the content and format of the essays.

Forty of my students, discussing their worst assignments ever, agreed unanimously that nothing proves more disheartening, or more irritating, than a vague assignment. Accordingly, time spent clarifying an assignment ultimately saves time in two ways. It reduces the percentage of tangent-riding, superfluous and/or confusing prose you will be confronting; few tasks consume more time than hacking through a "birdshot-and-kitchen sink" essay tring to locate correct answers in the verbal underbrush. Unambiguous assignments also save angry office hours spent justifying a "D" to the student who responded to your question on theories of mass extinction with five hundred words on the decline of Catholicism.

Two corrollaries for take-home assignments: 1) set aside class time to discuss assignments -- encourage questions and answer them sympathetically; 2) type all assignments, ditto/xerox and distribute them, because oral assignments invite chaos.

• Make grading criteria explicit in advance. Few people like working in the dark. For that matter, not everyone likes working; many students periodically need to be informed that conscientiousness is worth their while. If you want well-organized essays, announce that you will take organization into account when grading. This may be the surest way of combating academic entropy. And when my students wrote about their worst writing experiences, they ranked murky grading standards up there with vague or misleading assigments as a major cause of dissatisfaction. The clearer the standards, the less student confusion and resentment, the fewer office hour showdowns.

And most importantly, the better the papers.

WRITING ANXIETY

A student seeks advice during your office hours. He's uneasy about the upcoming midterm or final, or writing the course term paper. He recounts to you his unsuccessful writing experiences, his difficulties with papers and exams in other classes, or his recurring nightmare of staring at a blank piece of paper, unable to write the first word. What, he asks you, can he do? And what, you ask yourself, can you tell him? For your student is almost a classic case of writing anxiety.

Writing anxiety--simply, a fear of writing--has been a concern of Morris Holland, Assistant Vice Chancellor of Student Development, for some time. It is also the concern of many TAs who have seen their students "freeze" on an essay exam or agonize about writing a paper that they have thoroughly researched. Dr. Holland's study of student writing at UCLA posits an explanation for this writing anxiety phenomenon; he has also devised a few techniques that TAs could employ to lessen their students' tension about writing.

In the writing anxiety cycle, the anxious student has experienced previous unpleasant, stressful and (in terms of grades) unrewarding writing experiences. Remembering these experiences, he practices "writing avoidance" --he avoids any extracurricular writing, avoids writing classes, delays taking required composition courses and chooses a major where he perceives little need for writing. However, when he finds himself in a position where writing is unavoidable, he faces "cognitive disruption"--his sweaty palms, erratic breathing and muscular tension break his concentration, and his confidence is shaken by memories of previous writing disasters or

his uncertainty about what is expected of him. Since both "avoidance" and "disruption" are likely to affect the student's performance, each writing situation becomes a negative experience, which in turn reinforces the writer's anxieties.

In this self-perpetuating cycle, the TA's intervention is crucial. He or she can, either in individual conferences or in group paper-writing sessions, counteract the students' tension by explaining how they can relax in the writing act. The TA can combat the students' cognitive disruption by urging them to control negative thoughts about their writing ability and by initiating positive writing experiences. In short, the TA can help to create a good environment for his or her student writers -- an environment which they can learn to recreate for themselves.

One way the TA can give the students a positive writing experience is with some free-writing exercises -- that is, non-evaluated writing. The TA can also make a special effort to clarify paper topics and his or her expectations on exam responses, so that the students have a clear idea of what is being expected of them and the basis on which they will be evaluated. In the preparation of a long paper, the TA can provide the right kind of guidance for students. Dr. Holland suggests that too often students confront the huge assignment -- the complete paper -- rather than breaking down and carefully examining the writing process. How does one eat an elephant? The only answer--in small bites--is the solution most workable for anxious writers. If, therefore, students know the right steps to take in the right sequence they will see the writing task as a series of manageable steps, not an impossible leap from blank paper to completed term paper. The TA can point the student toward this kind of sequencing.

SOME CRITERIA FOR GRADING STUDENT ESSAYS (or: Specific Things to Complain About)

Holistic Considerations

- First, has the student complied with the terms of the assignment? Has he or she answered the question? Has the material been covered adequately and accurately? When facts are involved, has the student gotten the right facts straight?

- Does the student communicate clearly and effectively? Or, to quote one TA's dictum, "A piece of writing should be an act of communication, not a test of the reader's clairvoyance."

- Has the student thought creatively about the topic? Has he or she mastered the facts well enough to understand the relationships between and among them, and their positive ramifications? Is there a spark of originality and perceptivity or is

the essay merely a regurgitation of lecture notes and textbook?

- Does the student successfully capture your attention so that you want to go on reading?

Thesis: the paper has a clear central idea.

- The essay's thesis is clearly stated (usually, but not necessarily, in the opening paragraph).

- It is sustained throughout the essay. The essay is free of irrelevancies (the "birdshot-and-kitchen-sink" approach").

- The essay builds to a conclusion (explains and substantiates the thesis) and carries it through to completion.

Evidence: the central idea is sufficiently developed by the use of details, examples, logical arguments.

- All evidence is relevant to the point under discussion.

- There is enough evidence to support the point being made.

- The evidence is explained fully.

- The student has anticipated objections to the thesis and has answered them fairly.

- Any evidence taken from outside materials (such as journals, and other textbooks) is used fairly and adequately documented.

Organization: the method of presentation is clear and effective.

- The subject is broken down into its logical divisions/ subtopics.

- The individual paragraphs sufficiently develop these subtopics.

- Each paragraph has a clear topic sentence or adequate transitional marker (i.e. there are smooth transitions from one idea to the next).

- The sequence of ideas is logical and complete (on the basis of the thesis).

Usage: does the essay contain careless mistakes and mechanical inconsistencies which distract the reader's attention?

- Papers should be free of major grammar, spelling, and punctuation errors.

TIPS ON WRITING PAPERS (from History 6A)

Introduction

The purpose for writing the three short papers required in History 6A is to provide an opportunity for you to formulate your ideas on historical questions and to improve your facility in expressing your ideas in written form. You will not be graded on your point of view but on the quality of your paper. Information on topics for papers will be passed out in your discussion group.

Research Procedures

Since the first rule of writing is obvious--have something to say--research procedures are important. When you have a firm idea of your topic you are ready to begin. In this effort, you will find some 3 x 5 cards very useful. Armed with your cards and guided by your topic, skim though the books or other research materials and note bibliographic information (do not forge page numbers) of items which appear to be important to your argument. A short outline of the paper will prove invaluable at this stage. Finally, sort your cards into various categories. You are now ready to write your first draft. It is impossible to say how many drafts of a paper one should write; suffice it to say that few good papers are written in one or two drafts.

Structure of Your Paper

The easiest way to write a short paper is to visualize it in three parts: the beginning, middle, and end. Your beginning paragraph should clearly state your thesis, the middle paragraphs -- "body" of your paper -- should present the various points in order of increasing interest. Three favorite methods of organizing the body of a paper are (1) chronologically, (2) categorically, and (3) stages-of-development. When you have exhausted all points of argument, it is time to start on your concluding paragraph. The discussion below details what paragraphs in each part of the paper should contain.

Paragraphs are blocks with which your paper is built. Probably the closest one can come to defining a paragraph is to say that it is a single idea. Paragraphs vary in size depending on the idea under discussion and the medium being used by the writer. For the beginner, it is probably best to force oneself to write paragraphs of at least four or five sentences. After you are accustomed to this length and are able to handle the language, you can begin to vary the size for structural and rhetorical emphasis.

Like the paper itself, a paragraph is best visualized in terms of a beginning, a middle, and an end. Generally, your first sentence will be a <u>topic</u> sentence, stating the "mini" thesis of the paragraph. The last sentence should be the most emphatic and should sew up the argument in the paragraph. Not unexpectedly, the middle sentences should get you smoothly from the beginning to the end sentence. There are some minor variations between paragraphs in the begining, middle and end of your paper.

The <u>beginning paragraph</u> should present your main idea to the best advantage. The best place for the thesis sentence, which is also the thesis sentence of the entire paper, is at the <u>end</u> -- not at the beginning -- of your paragraph. Experienced writers start their first paragraph in a variety of

ways, some use a quote; others, an innocuous proposition; still others, a general statement on the topic under discussion. From this opening generalization, regardless of the form, one should move progressively down to particulars until, in the last sentence of your beginning paragraph, you write your clearest and most emphatic exposition of your thesis.

The middle paragraph is the standard paragraph, the little essay in itself with its own beginning and end. Each topic sentence must somehow hook onto the paragraph above it, by utilizing some transitional word or phrase. You may simply repeat a word from the sentence that ended the paragraph just above. Or you may get from one paragraph to the next by the usual stepping stones, like but, however, nevertheless, therefore, indeed, of course, etc. As you become more aware of the mechanics of writing, you will find yourself compiling mental lists of these transitional words and phrases as you read other people's writings. One brief transitional touch in your topic sentence is usually enough.

The end paragraph is best thought of as the first paragraph upside down. The first sentence is the thesis of your paper. The transitional word or phrase employed here is often one of finality or summary -- then, finally, thus, in conclusion, etc.

CHEATING AND PLAGIARISM

Dr. Morris Holland, Assistant Vice Chancellor of Student Development, administered several anonymous questionnaires dealing with cheating. About 300 students were asked whether they had cheated and 35 percent answered in the positive direction. The conclusion that is inescapable is that a significant portion of people at UCLA cheat in classes. The University takes the position that the best way to handle cheating is first to attempt to prevent it and second, if it occurs, to deal with it swiftly and decisively.

Plagiarism is the most prevalent form of cheating on campus, and it is also the hardest to prevent. Plagiarism in a term paper or other written assignment cannot be proven unless the original source is found. An instructor who suspects that a student has plagiarized a source should compare the questionable material with other samples of the student's writing, if possible. An instructor should always feel free to contact any student he or she suspects of plagiarism and inquire about the student's use of sources and methodology. Some students cannot distinguish between paraphrasing and plagiarism, and many do not understand the implications of cheating and plagiarism. The issues must be clearly understood by the TA and explicitly communicated to the students.

PROCEDURES FOR HANDLING CASES OF CHEATING

All cases of classroom dishonesty should be reported to the Dean of Students. It is, however, possible to deal with the student directly, without notifying the Dean, <u>if</u> the student admits that he or she is guilty and agrees with the instructor on the disciplinary action to be taken. When an instructor suspects a student of cheating and either cannot contact the student or come to an agreement with him or her regarding the offense, the instructor must award a course grade of DR (deferred report). The instructor may <u>not</u> decide that the student is guilty or assign a punitive F for cheating, and cannot penalize the student for work he or she did without cheating. The DR grade which reflects suspicion of cheating, is temporary and must be replaced eventually with a regular letter grade. An instructor who assigns a DR grade must state his or her reasons for doing so in letters to the student and the Dean of Students.

Once a DR grade has been assigned, the case must be handled by the Dean of Students Office. At the administrative level, the burden of proof lies with the faculty. All disciplinary cases at UCLA, including those involving cheating, are resolved through a two-track system. All but a handful of the many cheating cases reported annually are resolved when the student confers with a Dean, usually admits to his

or her guilt and accepts an appropriate penalty. If the student does not admit to being guilty, the case proceeds immediately to the more formal track in which the student's position is reviewed by the Student Conduct Committee in a public or private hearing. The student must abide by the decision of this committee, unless, under certain circumstances, he or she wishes to appeal its recommendation to the Chancellor.

In all instances, the record of a cheating case remains only in the Dean of Students Office and cannot be released to persons outside that office without the permission of the student. The period of time for which a cheating penalty remains on a student's record varies according to the seriousness of the offense.

UNDERGRADUATES' ATTITUDES ON CHEATING

In 1977, an academic inventory of UCLA undergraduates was completed. A portion of that inventory surveyed undergraduate feelings about cheating. 71% responded that in their opinion TAs and faculty should make a greater effort to eliminate cheating. The relevant sections of the 1977 inventory are reproduced below.

From your experience, how many students usually cheat on exams, term papers, etc.?

12% most students
83% some students
5% none
_____ don't know/no opinion

A. Have you ever cheated in your pre-UCLA courses? (e.g. jr. high, high school, jr. college)

51% yes
49% no

B. Have you ever cheated in a UCLA course?

23.5% yes
76.5% no

Using the scale below, please rate the extent to which each of the following factors contributes to cheating. (Please fill in each space)

1 = contributes significantly
2 = contributes somewhat
3 = contributes very little
4 = contributes nothing
X = no opinion

Mode	x Mean	
1	1.9	a. strict curve grading
1	1.6	b. large class size
4	3.3	c. essay exams
1	2.2	d. take-home exams
1	1.2	e. competition for grades
2	2.3	f. peer pressure
4	3.5	g. P/NP grading system
1	1.6	h. letter grading system
2	1.85	i. objective exams (i.e. T/F, fill-in, etc.)
4	3.3	j. open-book or open notes exams
2	2.0	k. nonchalant attitude about cheating on part of students

2	2.3	l. nonchalant attitude about cheating on part of faculty
	_____	m. other (specify) _____

Do you feel that cheating has increased since you have attended UCLA?

%	
13	increased significantly
17	increased slightly
65	has not changed
4	decreased significantly
____	no opinion

A. Do you feel that faculty/TAs should make greater efforts to eliminate cheating?

71%	yes
29%	no
_____	no opinion

B. Some possible ways to decrease opportunities for cheating are listed below. Using the scale below, please indicate your feelings about the effectiveness of each of the methods. (Please fill in each space.)

1 = very effective
2 = somewhat effective
3 = somewhat ineffective
4 = totally ineffective
X = no opinion

Mode	x Mean	
2	1.9	a. alternate seating during exams/quizzes
1	2.2	b. monitored video cameras
4	3.6	c. graduated seating by GPA ('A' students sit together, 'B' students sit together, etc.)
2	2.0	d. special test proctors (plus TAs and professor)
	_____	e. other (specify) _____

A FAIR SHARE AND AN HONEST EFFORT

Thoughtful planning can aid in establishment of cooperative, honest, classroom environments and can minimize instances of dishonesty. Students deserve assurance that everything possible will be done to maintain fair practices, that cheating will not be tolerated and that there will be no laxness in the procedures undertaken to prevent abuse.

A well-planned examination includes pre-exam security, and adequate space for administration of the exam, prevention of "ringers," adequate proctoring and secure handling of graded papers. The following procedures are selections from more extensive material available in the Teaching Assistant Training Program office (80 Powell Library):

1. Provide an examination room large enough to seat students only in every other seat. To obtain a second room for large classes, contact the Scheduling Office (extension 51091) as early in the quarter as possible.

2. Use alternate forms for objective exams. If questions on the first page are scrambled and the remaining pages are ordered differently, two forms of the exam can be generated, and wandering eyes will be discouraged.

3. Seat students, rather than letting them sit next to friends. One department uses a computer program to seat students randomly.

4. Check Photo ID Cards as students enter the examination room to be certain that each student takes his or her own exam.

5. Don't let students leave anonymously once the exams have been distributed. Have students sign in and be sure each turns in an exam before leaving.

6. Arrange for enough proctors (minimum of two) so that the class can be observed from front and back; one proctor can watch while another answers student questions, and exams can be collected in an orderly manner.

7. Students behaving in a suspicious or disturbing manner should be moved at once to a front row seat.

8. All books, notes, etc., should be placed well out of sight, not on the empty seat next to the student.

9. When bluebooks are used, require that they be turned in prior to the examination for stamping and random redistribution.

10. Photocopy exams (or at least a sample of them) before they are returned to the student to prevent altered answers.

If you have found additional effective methods of preventing classroom dishonest or if you are struggling with unsolved cheating problems, we invite you to share your experiences with the other 1800 teaching assistants on campus via the TA Newsletter. A determined and cooperative effort on the part of all TAs to eliminate classroom dishonesty can go a long way toward improving the educational environment at UCLA.

PAID PAGES

For the right price anyone can get "paid pages." You can get some a mile and a half from campus. By getting some, you will have saved yourself long hours in the library. By getting some, you almost certainly improve you GPA. Now, here's the best part. There's virtually no risk involved.

That's right. Only you and the term paper mill will know. you've just purchased a paper written by someone else with the intention of handing that paper in for a grade. This is formally known as plagiarism.

Unlike other forms of learning, writing a paper for a course is considered by many of us to be more painful than a whole year of Organic Chemistry. Students generally

do not have confidence in their writing skills and therefore are wary of courses in which writing a paper is required. However, once a student is enrolled in such a course, he or she must eventually hand in a paper. Whether that paper is written by the same student whose name is on the title page could be determined largely by a term paper mill's influence.

One of the major reasons for plagiarism at UCLA is that term paper mills make it quite easy for a student to cheat. Their approach is quite simple; they advertise like hell. University policy forbids such advertisement on campus, yet the following is an example of what can be easily found at UCLA: "got those term paper blues again? If you are running short on time and your assignments are piling up, do yourself a favor, try PACIFIC RESEARCH...Our staff of writers is quite capable in virtually all academic areas."

Four companies that I know of (Pacific Research, Author's Research, Research Assistance, and National Research) advertise quite regularly on campus. Only the last two companies are located in Los Angeles; the others have catalogues from which one can order his or her paper through the mail. Research Assistance deserves the gold star for being the most persistent company: besides advertising in the DAILY BRUIN for the past year and a half, this company places business cards on all cars parked in UCLA lots, slips its advertisements under dorm room doors, and blatantly tacks its message on any bulletin board or classroom on campus where there is room. Research Assistance boasts of main-taining 12,000 papers in its files, and if you still can't find the paper you want, they'll write one for you (Master's Theses included). These companies are protected under the law because the fine print states "All materials are sold for research assistance only." However, the purchaser is also promised that his or her paper will not be sold to anyone else at the school he or she attends for a certain period of time.

Besides the influence of the actual volume of term paper mill advertising (which implies a very profitable business) some students do not bother to write their own papers because the risks seem negligible. The possibility of being caught appears remote, and possible future penalties for their present actions are not even considered.

Unfortunately, the student who plagiarizes is hurting both himself or herself and his or her classmates. Obviously, one divorces himself or herself from the learning process by purchasing a paper. Similarly, papers which have been bought at a term paper mill usually receive higher grades, thus raising the class curve for those who legitimately wrote their papers.

Something must be done to minimize or eliminate this form of cheating. Remember

that it is better to prevent plagiarism from happening than to have to deal with it afterward. The following are some suggestions:

- Take some time to spell out the consequences of being caught for plagiarism (which is considered premeditated cheating): first offense, if brought to the attention of the Dean of Students, is suspension from school. Second offense will result in dismissal from the University. Make the students realize the consequences of their actions.

- Explain to the students how they hurt themselves and others when they plagiarize.

- Your relationship with the students is probably closer than the professor's relationship with them. Make it clear that you will be personally affronted by any incident of plagiarism. It may deter students who would have considered cheating but fear losing your respect.

- Ask for all papers to be turned in with rough drafts attached.

- Tell your students that you have assigned and read hundreds of term papers like the ones they are writing (even if this is not true) and that you can spot a plagiarized paper a mile away.

- Each term paper mill publishes a catalog with listings of all its papers. Your department chairman should have a copy of the paper topics relevant to your discipline (the Dean of Students Office has the actual catalogs). If you suspect a student of plagiarism, check the paper topic with the catalog listings. If you suspect the paper was bought locally, you can visit the appropriate mill and ask to buy the paper.

- Remove all term paper advertisements from your classroom. Especially be on the lookout a few weeks before finals, when ads multiply astronomically.

GRADING*

The evaluation of student performance in the course is a problem which TAs must confront whether they are conducting their own course, or serving as an apprentice to regular faculty. This section includes material on making comparisons with other students in a course, some basic guidelines regarding the expectations and communication of standards to students, a comparison of several methods for computing course grades, thoughts on grading versus evaluation, and the matter of grading in multi-section courses.

Comparisons With Other Students

By comparing a student's overall course performance with that of some relevant group of students, the instructor assigns a grade to show the student's level of achievement or standing within that group. An "A" might not represent excellence in attainment of knowledge and skill if the reference group as a whole is somewhat inept. All students enrolled in a course during a given semester or all students enrolled in a course since its inception are examples of possible comparison groups. The nature of the reference group used is the key to interpreting grades based on comparisons with other students.

Some Advantages of Grading Based on Comparison with Other Students:

- Individuals whose academic performance is outstanding in comparison to their peers are rewarded.

- The system is a common one that many faculty members are familiar with. Given additional information about the student, instructor, or college department, grades from the system can be interpreted easily.

Some Disadvantages of Grading Based on Comparison with Other Students:

- No matter how outstanding the reference group of students is, some will receive low grades; no matter how low the overall achievement in the reference group, some students will receive high grades. Grades are difficult to interpret without additional information about the overall quality of the group.

- Grading standards in a course tend to fluctuate with the quality of each class of students. Standards are raised by the performance of a bright class and lowered by the performance of a less able group of students. Often a student's grade depends on who was in the class.

- There is usually a need to develop course "norms" which account for more than a single class performance. Students of an instructor who is new to the course may be at a particular disadvantage since the reference group will necessarily be small and very possibly atypical compared with future classes.

Comparisons with Established Standards

Grades may be obtained by comparing a student's performance with specified absolute standards rather than with such relative standards as the work of other students. In this grading method, the instructor is interested in indicating how much of a set of tasks or ideas a student knows, rather than how many other students have mastered more or less of that domain. A "C" in an introductory statistics class migh indicate that the student has minimal knowledge of descriptive and inferential statistics. A much higher achievement level would be required for an "A."

Note that students' grades depend on their level of content mastery; thus the levels of performance of their classmates have no bearing on the final course grade. There are no quotas in each grade category. It is possible in a given class that all students could receive an "A" or a "B."

Some Advantages of Grading Based on Comparison to Absolute Standards:

- Course goals and standards must necessarily be defined clearly and communicated to the students.

- Most students, if they work hard enough and receive adequate instruction, can obtain high grades. The focus is on achieving course goals, not on competing for a grade.

- Final course grades reflect achievement of course goals. The grade indicates "what" a student knows rather than how well she or he has performed relative to the reference group.

- Students do not jeopardize their own grades if they help another student with course work.

Some Disadvantages of Grading Based on Comparison to Absolute Standards:

- It is difficult and time consuming to determine what course standards should be for each possible course grade issued.

- The instructor has to decide on reasonable expectations of students and necessary prerequisite knowledge for subsequent courses. Inexperienced instructors may be at a disadvantage in making these assessments.

- A complete interpretation of the meaning of a course grade cannot be made unless the major course goals are also available.

Comparisons Based on Learning Relative to Improvement and Ability

The following two comparisons--with improvement and ability--are sometimes used by instructors in grading students. There are such serious philosophical and methodological problems related to these comparisons that their use is highly

questionable for most educational situations.

Relative to Improvement

Students' grades may be based on the knowledge and skill they possess at the end of a course compared to their level of achievement at the beginning of the course. Large gains are assigned high grades and small gains are represented by low grades. Students who enter a course with some pre-course knowledge are obviously penalized; they have less to gain from a course than does a relatively naive student. The post-test/pretest gain score is more error-laden, from a measurement perspective, then either of the scores from which it is derived. Though growth is certainly important when assessing the impact of instruction, it is less useful as a basis for determining course grades than end-of-course competence. The value of grades which reflect growth in a college-level course is probably minimal.

Relative to Ability

Course grades might represent the amount students learned in a course relative to how much could be expected to learn as predicted from their measured academic ability. Students with high ability scores (e.g. scores on the Scholastic Aptitude Test or American College Test) would be expected to achieve higher final examination scores than those with lower ability scores. When grades are based on comparisons with predicted ability, an "overachiever" and an "underacheiver" may receive the same grade in a particular course, yet their levels of competence with respect to the course content may be vastly different. The first student may not be prepared to take a more advanced course, but the second student may be. A course grade may, in part, reflect the amount of effort the instructor believes a student has put into a course. The high ability students who can satisfy course requirements with minimal effort are penalized for their apparent "lack" of effort. Since the letter grade alone does not communicate such information, the value of ability-based grading does not warrant its use.

A single course grade should represent only one of the several grading comparisons noted above. To expect a course grade to reflect more than one of these comparisons is too much of a communication burden. Instructors who wish to communicate more than relative group standing, or subject matter competence or level of effort, must find additional ways to provide such information to each student.

BASIC GRADING GUIDELINES

Grades should conform to the practice in the department and the institution in which the grading occurs.

Grading policies of the department, college, or campus may limit the grading procedures which can be used

and force a basic grading philosophy on each instructor in that administrative unit. Departments often have written statements which specify a method of assigning grades and meanings of grades. If such grading policies are not explicitly stated or written for faculty use, the percentages of A's, B's, C's, D's and F's given by departments and colleges in their lower and upper divisions may be indicative of implicitly stated grading policies.

The University regulations encourage a uniform grading policy so that a grade of A,B,C,D, or F will have the same meaning independent of the college or department awarding the grade. In practice, grade distributions vary by department, by college and, over time, within each of these units. The grading standards of a department or college are usually known by other campus units. For example, a "B" in a required course given by Department X might indicate that the student probably is not a qualified candidate for graduate school in that or a related field. Or, a "B" in a required course given by Department Y might indicate that the student's knowledge is probably adequate for the next course. Grades in certain "key" courses may also be interpreted as a sign of a student's ability to continue work in the field. The faculty member who is uninformed about the grading grapevine may unwittingly make misleading statements about a student and also misinterpret information received. If an instructor's grading pattern differs markedly from others in the department or college and the grading is not being done in special classes (e.g. honors or remedial), the instructor should reexamine his or her grading practices to see that they are rational and defensible. Sometimes an individual faculty member's grading policy will differ markedly from that of the department and/or college and yet be defensible. For example, the department and instructor may be using different grading standards, course structure may seem to require a grading plan which differs from departmental guidelines, or the instructor and department may hold different ideas about the function of grading. Usually in such cases, a satisfactory grading plan can be worked out. Faculty new to the University can consult with the department head for advice about grade assignment procedures in particular courses.

Grading components should yield accurate information.

Carefully written tests and/or graded assignments (homework papers, projects) are keys to accurate grading. Because it is not customary at the university level to accumulate many grades per student, each grade carries great weight and should be as accurate as possible. Poorly planned tests and assignments increase the likelihood that grades will be based primarily on factors of chance. Some faculty members argue that over the course of a college

education, students will receive an equal number of higher-grades-than-merited and lower-grades-than-merited. Consequently, final GPA's will be relatively correct. However, in view of the many ways course grades are used, each course grade is often significant in itself to the student and others. No evaluation efforts can be expected to be perfectly accurate, but there is merit in striving to assign course grades that most accurately reflect the level of competence of each student.

Grading plans should be communicated to the class at the beginning of each semester.

By stating the grading procedures at the beginning of a course, the instructor is essentially making a "contract" with the class about how each student is going to be evaluated. The contract should provide the students with a clear understanding of the instructor's expectations so that the students can structure their work efforts. Students should be informed about: which course activities will be considered in their final grade; the importance or weight of exams, quizzes, homework sets, papers and projects; and which topics are more important than others. Students also need to know what method will be used to assign their course grade and what kind of comparison the course grade will represent. By informing students early in the semester about course priorities, the instructor encourages students to study what he or she deems valuable. All of this information can be communicated effectively as part of the course outline or syllabus.

Grading plans stated at the beginning of the course should not be changed without thoughtful consideration and a complete explanation to the students.

Two common complaints found on students' post-course evaluations are that grading procedures stated at the beginning of the course were either inconsistently followed or were changed without explanation or even advance notice. One could look at the situation of altering or inconsistently following the grading plan as being analogous to playing a game wherein the rules arbitrarily change, sometimes without the players' knowledge. The ability to participate becomes an extremely difficult and frustrating experience. Students are placed in the unreasonable position of never knowing for sure what the instructor considers important. When the rules need to be changed, all of the players must be informed (and hopefully be in agreement).

The number of components or elements used to assign course grades should be large enough to enhance high accuracy in grading.

From a decision-making point of view, the more pieces of information available to the decision-maker, the more

confidence one can have that the decision will be accurate and appropriate. This same principle applies to the process of assigning grades. If only a final exam score is used to assign a course grade, the adequacy of the grade will depend on how well the test covered all relevant aspects of course content and how typically the student performed on one specific day during a 2-3 hour period. Though the minimum number of tests, quizzes, papers, projects, and/or presentations needed must be course-specific, each instructor must attempt to secure as much relevant data as are reasonably possible to insure that the course grade will accurately reflect each student's achievement level.

SOME METHODS OF ASSIGNING COURSE GRADES

Various grading practices are used by college and university faculty. The following is an examination of the more widely used methods and discussion of the advantages, disadvantages, and fallacies associated with each.

Weighting Grading Components and Combining Them to Obtain a Final Grade

Grades are typically based on a number of graded components (e.g. exams, papers, projects, quizzes). Instructors often wish to weight some components more heavily than others. For example, four combined quiz scores may be valued at the same weight as each of four hourly exam grades. When assigning weights the instruc-tor should consider the extent to which:

- each grading component measures important goals;
- achievement can be accurately measured with each grading component;
- each grading component measures a different area of course content or objectives compared to other components.

Once it has been decided what weight each grading component should have, the instructor should insure that the desired weights are actually used. This task is not as simple as it first appears. An extreme example of weighting will illustrate the problem.

Suppose that a 40-item exam and an 80-item exam are to be combined so they have equal weight (50 percent-50 pecent in the total). We must know something about the spread of scores or variability (e.g. standard deviation) on each exam before adding the scores together. For example, assume that scores on the shorter exam are quite evenly spread throughout the range 10-40, and the scores on the other are in the range 75-80. Because there is so little variability on the 80-item exam, if we merely add each student's scores together, the spread of scores in the total will be very much like the spread of scores observed on the first exam. The second exam will have very little weight in the total score.

The net effect is like adding a constant value to each student's score on the 40-item exam; the students maintain essentially the same relative standing.

The information appearing in Figure 1 will be used to demonstrate how scores can be adjusted to achieve the desired weighting before combining them. Exam No. 2 is twice as long as the first, but there is twice as much variability in Exam No. 1 scores. This is the "observed weight." The standard deviation tells us, conceptually, the average amount by which scores deviate from the mean of test scores. The larger the value, the more the scores are spread throughout the possible range of test scores. The variability of scores (standard deviation) is the key to proper weighting. If we merely add these scores together, Exam No. 1 will carry 66 percent of the weight and Exam No. 2 will carry 33 percent weight. We must adjust the scores on the second exam so that the standard deviation of the scores will be similar to that for Exam No. 1. This can be accomplished by multiplying each score on the 80-item exam by two; the adjusted scores will become more varied (standard deviation = 7.0). The score from Exam No. 1 can then be added to the adjusted score from Exam No. 2 to yield a total in which the components are equally weighted. A practical solution to combining several weighted components is to first transform raw scores to standard scores, z or T, before applying relative weights and adding.

	Exam #1	Exam #2	Total
# of Items	40.0	80.0	120.0
Stand. Dev.	7.0	3.5	
Desired weight	1.0	1.0	
Observed weight	2.0	1.0	
Multip. Factor	1.0	2.0	
New Stand. Dev.	7.0	7.0	
Actual Weight	1.0	1.0	

Figure 1. Combining Scores in a Weighted Composite

After grading weights have been assigned and combined scores are calculated for each student, the instructor must change the numerical scores into one of five letter grades. There are several ways of doing this; some are more appropriate than others.

The Distribution Gap Method

This widely-used method of assigning test or course grades is based on the relative ranking of students in the form of a frequency distribution or tally of student exam scores. The frequency distribution is carefully scrutinized for gaps, several consecutive scores which have zero frequency. A horizontal line is drawn at the top of the first gap ("Here are the A's!") and a second gap is sought. The process continues until all possible grade ranges (A-F) are identified. The major fallacy with this technique is the dependence on "chance" to form gaps. The gaps are random because measurement errors (due to

guessing, poorly written items, etc.) dictate where gaps will or will not appear. If scores from an equivalent test could be obtained from the same group, the gaps would likely appear in different places. Some students would get higher grades, some would get lower grades, and many grades would remain unchanged. Unless the instructor has additional achievement data to reevaluate borderline cases, many students could see their fate determined more by chance than performance.

Grading on the Curve

This method of assigning grades based on group comparisons is complicated by the need to establish arbitrary quotas for each grade category. What percent should get A's? B's? D's? Once these quotas are fixed, grades are assigned without regard to level of performance. The highest ten percent may have achieved at about the same level. Those who "set the curve" or "blow the top off the curve" are merely among the top group; their grade may be the same as that of a student who scored 20 points lower. The bottom five percent may be assigned F's though the bottom fifteen percent may be relatively indistinguishable in achievement. Quota-setting strategies vary from instructor to instructor and department to department and seldom carry a defensible rationale.

While some instructors defend the use of the normal or bell-shaped curve as an appropriate model for setting quotas, using the normal curve is as arbitrary as using any other curve. It is highly unlikely that our college and university students' abilities or achievement are normally distributed.

Grading on the curve is efficient from an instructor's point of view. Therein lies the only merit in the method.

Percent Method

The long-standing use of percent grading in any form is questionable. Scores on papers, tests, and projects are typically converted to a percent based on the total possible score. The percent score is then interpreted as the percent of content, skills, or knowledge over which the student has command. Thus, an exam score of 83 percent means that the student knows 83 percent of the content which is represented by the test items.

Grades are usually assigned to percent scores using arbitrary standards similar to those set for grading on the curve, i.e. students with scores 93-100 get A's and 85-92 is a B, 78-84 is a C, etc. The restriction here is on the score ranges rather than on the number of individuals who can earn each grade. Should the cutoff for an A be 92 instead? Why not 90? What sound rationale can be given for any particular cutoff? In addition, it seems indefensible in most cases to set grade cutoffs that remain constant throughout the course and several consecutive

offerings of the course. It does seem defensible for the instructor to decide on cutoffs for each grading component, independent of the others, so that the scale for an A might be 93-100 for Exam No. 1, 88-100 for a paper, 87-100 for exam No. 2, and 90-100 for the Final Exam.

Some instructors who use percent grading find themselves in a bind when the highest score obtained on an exam is only 68 percent, for example. Was the examination much too difficult? Did students study too little? Was instruction relatively ineffective? Oftentimes, instructors decide to "adjust" scores so that 68 percent is equated to 100 percent. Though the adjustment might cause all concerned to breathe easier, the new score is essentially the percentage of the exam content learned by the students. The exam score of 83 no longer means that the student knows 83 percent of the exam content.

A Relative Grading Method

Using group comparisons for grading is appropriate when the class size is sufficiently large (perhaps 35 students or more) to provide a reference group representative of students typically enrolled ihn the course. The following steps describe a widely-used and generally sound procedure:

1. Convert raw scores on each exam to a standard score (z or T) by using the mean and standard deviations from each respective test, set of papers, or presentations. Standard scores are recommended because they allow us to measure performance on each grading component with an identical or standard yardstick. When relative comparisons are to be made, it is not advisable to convert raw scores to grades and average the separate grades. This is because the distinction between achievement levels will be lost; differences will melt together as students are forced into a few broad categories.

2. Weight each grading variable before combining the standard scores. For example, double both exam standard scores and the standard score for the paper, triple the final exam standard score, and do nothing to the standard score for the presentation. The respective weights for these variables in the total will then be 20 percent, 20 percent, 20 percent, 30 percent, and 10 percent.

3. Add these weighted scores to get a composite or total score.

4. Build a frequency distribution of the total scores by listing all obtainable scores and the number of students receiving each. Calculate the mean, median, and standard deviation. Most calculators now available will perform these operations quickly.

5. If the mean and median are similar in value, use the mean for further computations. Otherwise use the median. Let's assume we have

chosen the median. Add one half of the standard deviation to the median and subtract the same value from the median. These are the cutoff points for the range of C's.

6. Add one standard deviation to the upper cutoff of the C's to find the A-B cutoff. Subtract the same value from the lower cutoff of the C's to find the D-F cutoff.

7. Use number of assignments completed or quality of assignments or other relative achievement data available to reevaluate borderline cases. Measurement error exists in composite scores also!

Instructors will need to decide logically on the values to be used for finding grade cutoffs (one-half, one-third, or three fourths of a standard deviation, for example). How the current class compares to past classes in ability should be judged in setting standards. When B rather than C is considered the average grade, step five will identify the A-B and C-B cutoffs. Step six would be changed accordingly.

Relative grading methods like the one outlined above are not free from limitations; subjectivity enters into several aspects of the process. But a systematic approach similar to this one, and one which is thoroughly described in the first class meeting, is not likely to be subject to charges of capricious grading and miscommunication between student and instructor.

An Absolute Standard Grading Method

Absolute grading is the only form of assigning grades which is compatible with mastery or near-mastery teaching and learning strategies. The instructor must be able to describe the learner behaviors expected at the end of instruction so that grading components can be determined and measures (tests, papers, and projects) can be designed from the sets of objectives.

Each time achievement is measured, the score is compared with some criterion or standard set by the instructor. Students who do not meet the minimum criteria level study further, rewrite their paper, or make changes in their project to prepare to be evaluated again. This process continues until the student meets the minimum standards established by the instructor. The standards are an important key to the success of this grading method. The following example illustrates how the procedures can be implemented step-by-step:

1. Assume that a test has been built using the objectives from two units of instruction. Read each test item and decide if a student with minimum mastery could answer it correctly. For short answer or essay items, decide how much of the ideal answer the student must supply to demonstrate minimum mastery. Make subjective decisions, in part, on the basis of whether

or not the item measures important prerequisites for subsequent units in the course or subsequent courses in the students' programs of study.

2. The sum of the points from the above step represents the minimum score for mastery. Next, decide what grade the criterion score should be associated with. Assume for our purposes that the criterion represents the C-B cutoff.

3. Reexamine items which students are not necesssarily expected to answer correctly to show minimum mastery. Decide how many of these items "A" students should answer correctly. Such students would exhibit exceptionally good preparation for later instruction. This step could be done concurrently with Step 1.

4. Add the totals from Steps 1 and 3 to find the criterion score for the B-A grade cutoff.

5. Each criterion score set in the above fashion should be adjusted downward by 2-4 points. This adjustment takes measurement error into account. It compensates for the fact that as test constructors, we may write a few ambiguous or highly difficult items which a well-prepared student might miss due to our own inadequacies.

6. After the exam has been scored, assign "A," "B," "C or less" grades using the criterion scores. Students who earn "C or less" should be given a different but equivalent form of the test within two weeks. A criterion score must be set for this test as described in Step 1. Students who score above the criterion can earn a "B" at most. Those who fail to meet the criterion on the second testing might be examined orally by the instructor for subsequent checks on their mastery.

7. Weight the grades from the separate exams, papers, presentations, and projects according to the percentages established at the outset of the course. Average the weighted grades (using numerical equivalents, e.g. A = 5, B = 4, etc.) to determine the course grade. Borderline cases can be reexamined using additional achievement data from the course.

GRADING VS. EVALUATION

A distinction should be made between components which an instructor evaluates and components which are used to determine course grades. Components or variables which contribute to determining course grades should reflect each student's competence in the course content. The components of a grade should be academically oriented--they should not be tools of discipline or awards for pleasant personalities or "good" attitudes. A student who gets an "A" in a course should have a firm grasp of the skills and knowledge taught in that course. If the student is merely marginal academically but very industrious and congenial, an "A" grade would be misleading

and would render a blow to the motivation of the excellent students in the program. Instructors can give feedback to students on many traits or characteristics, but only academic performance components should be used in determining course grades.

Some potentially invalid grading components are considered below. Though some exceptions could be noted, these variables generally should not be used to determine course grades.

Class Attendance

Students should be encouraged to attend class meetings because it is assumed that the lectures, demonstrations, and discussions will facilitate their learning. If students miss several classes then their performance on examinations, papers, and projects will likely suffer. If the instructor further reduces the course grade because of absence, the instructor is essentially submitting such students to "double jeopardy." For example, an instructor may say that attendance counts ten percent of the course grade, but for students who are absent frequently this may in effect amount to 20 percent. Teachers who experience a good deal of class "cutting" might examine their classroom environment and methods to determine if changes are needed and ask their students why attendance was low.

Class Participation

Obviously seminars and small classes depend on student participation to some degree for their success. When participation is important, it may be appropriate for the instructor to use participation grades. In such cases, the instructor should keep weekly notes regarding frequency and quality of participation; waiting until the end of the semester and relying strictly on memory makes a relatively subjective task even more subjective. Participation should probably not be graded in most courses, however. Dominating or extroverted students tend to win and introverted or shy students tend to lose. Students should be graded in terms of their achievement level, not in terms of their personality type. Instructors may want to give feedback to students on many aspects of their personality but grading should not be the means of doing so.

Mechanics

Neatness in written work, correctness in spelling and grammar, and organizational ability are all worthy traits. They are assets in most vocational endeavors. To this extent it seems appropriate that instructors evaluate these factors and give students feedback about them. However, unless the course objectives include instruction in these skills, students should not be graded on them in the course. A

student's grade on an essay exam should not be influenced by his/her general spelling ability, neither should his/her course grade.

Personality Factors

Most instructors are attracted to students who are agreeable, friendly, industrious, and kind; we tend to be repelled by those with opposite characteristics. To the extent that certain personalities may interfere with class work or have limited chances for employment in their field of interest, constructive feedback from the instructor may be necessary. An argumentative student who earns a "C" should have a moderate amount of knowledge about the course content. The nature of his or her personality should not have direct bearing on the course grade earned.

Instructors can and should evaluate many aspects of student performance in their course. However, only the evaluation information which relates to course goals should be used to assign a course grade. Judgments about writing and speaking skills, personality traits, effort, and motivation should be communicated in some other form. Some faculty use brief conferences for this purpose. Others communicate through comments written on papers or through the use of mock letters of recommendation.

GRADING IN MULTI-SECTIONED COURSES

Some rather unique grading problems are associated with large multiple-sectioned courses taught by many different instructors under the direction and leadership of one head instructor. In many of these situations there is a common course outline or syllabus, common text, and a set of common classroom tests. The head instsructor is often concerned about the potential lack of equity in grading standards and practices across the many sections. To promote fairness and equality, the following conditions might be established as part of course planning and monitored throughout the semester by the head instructor.

- The number and type of grading components (e.g. papers, quizzes, exams) should be the same for each section.

- All grading components should be identical or nearly equivalent in terms of content measured and level of difficulty.

- Section instructors should agree on the grading standards to be used (e.g. cutoff scores for grading quizzes, papers, or projects; weights to be used with each component in formulating a semester total score; and the level of difficulty of test questions to be used).

- Evaluation procedures should be consistent across sections (e.g. method of assigning

scores to essays, papers, lab write-ups, and presentations).

Though all of these conditions can be addressed in the course planning stage, their implementation may be a more difficult task. Successful implementation requires a spirit of compromise between section instructors and the head instructor as well as among section instructors. Frequent review of instructor practices by the head instructor and constructive feedback to the instructors are also needed. The following guidelines contain suggestions for promoting equity in grading across multiple sections:

1. To establish common grading components in each course section, all section instructors should agree at the beginning of the course on the number and kind of components to be used. Agreement should also be reached on the component weighting scheme and final requirements for each course grade (A, B, C, etc.).

2. To encourage instructional adequacy across sections, many head instructors distribute the same course objectives, outlines, lecture notes, and handouts to all section instructors. If each instructor is allowed to contribute to the construction of common tests, quizzes, or projects, the section instructors will become more aware of important course content and the expectations of the head instructor. This awareness will serve to "standardize" section instruction, also.

3. Prior to the administration of an exam, quiz or project, all instructors should agree on established letter grade cutoff scores. The group consensus helps to standardize the administration of grading procedures by reducing the number of "lone wolves" who do not wish to conform to someone else's standards.

4. In cases where the grading of particular components is more subjective than objective (e.g. more influenced by personal judgment), organized group practice helps to unify the application of evaluation procedures. For example, head instructors may wish to distribute examples of A, B, or C quality projects to section instructors as models prior to the grading of their own class projects. Or, groups of instructors may wish to practice grading a stack of essay exams by circulating and discussing their individual ratings. Through such group practice the instructors involved can compare their evaluation practices with one another and become more uniform over time.

5. Any grading or evaluation changes made in a particular section should be implemented in all sections.

EVALUATING GRADING POLICIES

Instructors can compare their grade distributions with the grade distributions for similar courses in the same department. Information is probably available through individual departments.

Example

Suppose you taught one section of a lower level course with 40 students. The course is the first in a three-course sequence which is required in students' curriculum. Your grade distribution turned out to be:

A = 5% B = 20%C = 40%
D = 30% F = 5%

When you compare your course's grade distribution with that of all of the previous year's sections of the same course, you found the following grade distribution:

A = 22% B = 30%C = 38%
D = 9% F = 1%

Because your grade distribution is not consistent with departmental practice, further investigation is warranted to find out if your particular class was atypical, if your expectations were too high, if the exams upon which the grades were based were too difficult for the course, etc. The fact that your grade distribution does not resemble the grades assigned by your colleagues does not necessarily indicate that your grading methods are incorrect or inappropriate. However, discrepancies that you regard as significant should suggest the need for reexamination of your grading practices in light of departmental or college policies.

*Adapted with permission from Assigning Course Grades, Office of Instructional Resources, University of Illinois at Urbana-Champaign, 1979.

USING AUDIO-VISUAL AIDS

Audio-visual aids provide the TA with a means of presenting well-organized and well-paced material to students. Often students need to have information simply and visually presented to reinforce material that has been presented more dynamically (and perhaps less straightforwardly) in a lecture or a discussion. Audio-visuals, by their nature, provide a framework within which an organized effort in teaching is not only possible but is also easily manageable. Audio-visuals have several advantages: they can overcome physical limitations such as class size and time; and they can extend human experience by simulating widely different aspects of it.

USING AUDIO VISUAL AIDS: HOW TO AVOID DRY AND DULL A/V PRESENTATIONS*

Consider the possible impact of your A/V materials.

Assuming that the physical limitations of equipment and graphic problems have been overcome and that the information is correct, what strategy might an instructor employ to make presentations more effective using A/V materials? One of the most important ideas to remember in the use of audio-visuals is the impact of the materials. Decide what impact an item may have for the students. Will it elicit an emotional response, suggest some thing new, explain, or give information, raise a question? Use audio-visuals to present information which student might not otherwise experience in an instructional environment.

To illustrate this point, the American Library Association has produced a film entitled The Speaker. The main point of the film concerns the constitutional right of free speech. The impact is argumentative in nature. The instructor, then, should capitalize upon the film's strong point, presenting various aspects of the argument for discussion. The film also attempts to present the issue as if it were a real situation. The events take place in a high school setting. The students have decided to invite a controversial speaker to an honors day program. As the program is advertised in the school and community, the resulting chain of events brings pressure upon the student group to cancel the speaker. The audience is left to decide the issue for itself. Audio-visual materials such as The Speaker create realism in the classroom that is otherwise probably not possible.

Use unique materials if possible.

If at all possible, choose A/V items which will be unique for the students. Although many times finding something different or unusual is not feasible, the teacher should challenge the student with the unexpected as much as possible. One instructor, frustrated with having to use

the same materials each semester, attempted a different approach. Rather than show the complete film chosen for a class period, he carefully selected a portion of the film near the end and showed it to the students. From the selected portion, the instructor had the students conceive the portion of the film which they had not seen. The resulting discussion focused upon student opinions and the point of the film.

Select materials which fit your instructional objectives.

Be cautious in using audio-visuals. These materials are only as good as the planning, thinking, and preparation which precede their use. Do not let materials do your thinking for you. Purchased materials are designed to fit into preplanned instructional blocks, or have objectives which accompany the materials. Adapt or change these aids if possible, to fit your teaching objectives.

Usually audio-visual materials will add to a presentation if learning objectives can be written from the material. Do not use materials unless they are worth classroom time. Ask yourself: Would the information be more effectively presented in another way? Is there a strong possibility that attitude or behavior change will be an end result? Will the benefits from the presentation be measurable; for example, will it help to improve recall or help students remember important facts, enhance the quality of discussion, or increase the students' ability to apply information? All of these questions will need to be answered before a final decision can be made as to whether or not audio-visual materials will add to the presentation.

Stimulate interest and direct learning.

One should be prudent in motivating students, that is, in stimulating interest. The pitfall is that the instructor will stop short and expect motivation to carry through with learning. It might or it might not. Or, it might conceivably result in misdirected learning. It is possible to motivate students but fail to follow through with teaching. Failure to bring teaching to a closure can be detrimental. Students who have been motivated to learn do not necessarily learn what should be learned simply because they have been motivated. Audio-visual materials can help the instructor stimulate interest and learning. That is, audio-visuals may establish cues which point the student in the right direction. For example, interest may be stimulated by using audio-visuals to demonstrate phenomena usually unobservable. In the health sciences, television and the electron microscope have given students access to data heretofore difficult for them to experience first hand.

Establish cues for learning.

On a less spectacular plane, the lowly transparency

can prove to be quite effective in making presentations. They lend themselves to diagrams, charts, schematics, and are effective in giving an orderly presentation regardless of the complexity of the material. Transparencies are especially effective when instructor-developed, and the instructor additionally is able to pay particular attention to providing the direction or cues for what could be learned.

One important caution should be observed. Avoid reading information directly form the audio-visual which students can read for themselves. Rather, the instructor should concentrate on explanation and details which relate to the concepts the audio-visual is illustrating.

Direct students' responses.

Many times students do not interpret information in the same way the instructor does. A transparency, for example can become a constant and unchanging cue or stimulus to which the instructor can repeatedly refer. Not only does the transparency become a common point of reference, but the instructor is able to elicit and direct the information students need.

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TYPES OF A/V: ADVANTAGES AND DISADVANTAGES*

Slides

Advantages:

- May be adapted for automatic presentations.
- Vivid colors.
- Can be complemented by synchronized audio program.
- Inexpensive to produce.

Disadvantages:

- Requires more planning and preparation than most other formats.
- Requires some classroom preparations (e.g. subdued light).
- Order during lecture not easily changed.

Filmstrips

Advantages:

- Generally the same as for slides.
- Useful for specific repetitive exercises.

Disadvantages:

- Order of filmstrip frames cannot be changed.
- Simple and general approach has limitations.

Overhead Transparencies

Advantages:

- Can maintain eye contact with the class.
- Highly flexible, can be updated or changed easily.
- No adaptation of classroom needed.
- Color or black and white.
- Spontaneity as well as planning and preparation by instructor possible.
- Blends well with instructor preferences (e.g. can be slow or fast paced, presents both complicated and simple concepts, excellent for summary).
- Probably the least expensive of all audio-visuals.

Disadvantages:

- Restricts movement.
- Have to learn usage to be effective.

16mm Film

Advantages:

- Ability to depict movement and animation.
- Can expand or compress film.
- Can be used from a variety of perspectives.
- A complete communication medium, juxtaposes time and space.

Disadvantages:

- Equipment is heavy and expensive; film is expensive.
- Requires subdued light.
- Requires experience to operate or trouble-shoot equipment.
- Difficult to use segments -- usually complete film must be presented, rigid time sequence.
- Requires great deal of preparation (sometimes it is easier to make the product rather than search for film).
- Will usually take up most of individual class period.

Video

Advantages:

- Very flexible.
- Significant diagnostic tool.
- May be edited for tailor-made instruction.
- Color or black and white possible.

Disadvantages:

- Requires experience as an operator.
- Requires proper lighting.
- Expensive.
- Audience number limited (video projection systems have remedied this problem to some extent).

Computer

Advantages:

- Frees instructor from repetitive instruction.
- Has unlimited patience for repetitive types of instruction.
- Efficient and effective in many instructional situations (e.g. computer will analyze student responses and will determine subsequent instruction).

Disadvantages:

- Expensive.
- Requires experienced operators.
- Although highly efficient when properly implemented, implementation may be frustrating.

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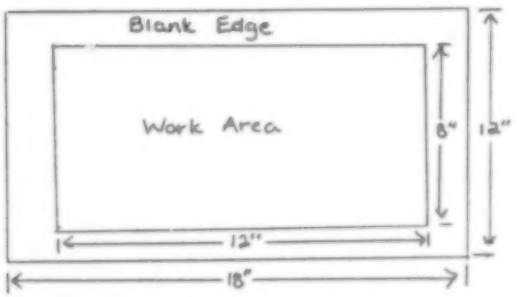
SUGGESTIONS FOR SLIDE PRESENTATIONS

The success of an oral presentation often depends on the visuals used. After producing some and being subjected to a large number of these presentations, a number of suggestions come to mind:

- Try to use only a single type of visual presentation. The 2 x 2 slide (35 mm transparency) has become the standard. Combining 2 x 2 slides and overhead transparencies is cumbersome at best. The equipment problems increase, handling of the different transparencies is clumsy, and rarely will the projectors work best from the same distance.
- Use carousel-type projectors whenever possible. Arrange your slide in advance and make sure the locking ring is in place. Use the 80-slide trays rather than the 140-slide trays. The 80-slide trays have wider slots for the slides so they do not jam as easily.
- Use a dark slide at the end of your slides. This prevents the audience from being blinded when you finish and also removes any valuable slides from the slide gate, where excessive heat may damage them.
- When you are finished with your slides, turn the projector off. Do not leave just the fan running. Kodak warns that forced cooling of the projector with just the fan shortens the life of the motor and bulb. The noise of the fan running for an extended period of time is objectionable during a presentation. The only time the fan should be left running to cool the projector is when the projector must be moved immediately. In this case, a hot filament in the bulb is more likely to break than a cool one.

• Try to use horizontal slides only. The horizontal format will always result in a larger effective viewing area. Sometimes vertical shots are more convenient or are better photos, but they present problems for projecting them. If you do use verticals, make sure to have a vertical slide at the very beginning of your tray that can be used to position and focus your projector. That way all of the vertical slide will be on the screen when you want it. If you should ever want to make a filmstrip or a video presentation from your slides, vertical will not work.

• Prepare your artwork for slides using the following format:



The standard 35 mm slide has a 2:3 horizontal format. The artwork should be confined to the inner work area, leaving a blank edge all the way around. These particular dimensions will assist you in preparing legible copy and make the photography much easier. Larger artwork can be used as long as a) the 2:3 format is retained and b) a blank margin is provided. There are 2 major problems with very large artwork: 1) the great reduction required frequently makes letters so small they cannot be read and 2) it is physically much more difficult to light large artwork, and as such the photography is more difficult.

• Keep all copy simple and legible. Eliminate small type. Typewritten copy seldom reproduces well. Line widths should remain constant; the fewer different widths used the better.

• Conventional maps make very poor slides. They combine large areas with very small lettering. Slides made from maps are seldom legible. Maps should be redrawn to emphasize important details.

• Don't use too many slides. This is one of the most common problems in slide presentations. It takes time for people to absorb the information on a slide. Using too many slides will easily overwhelm your audience.

• Keep slides simple. All-word slides should be concise, with no more than 15 words (5 is better). Limit each slide to one main idea. Use two or more simple slides rather than one complicated slide.

• Use charts and graphs rather than tables to display facts and figures. Visual comparisons can be made more quickly and easily with a graph. Tables tend to look complicated and be confusing.

• Use only good photographs. The strength of any presentation is weakened by poor photos. Close-up shots showing details are usually

more effective than overall views.

• Check to see if your slides are legible. The only way to do this is to project them under conditions similar to those you will be using for your presentation. Just because a graph or chart is legible in a book or journal doesn't mean it will be legible as a slide. If you can read a 2 x 2" slide without a magnifier, then people in the rear of a room can probably read it when projected.

• Use color whenever possible. But remember there is a thin line between brilliant, vibrant color and just plain gaudy (and professionals would never be gaudy, would they?).

• Rehearse your presentation. You can never rehearse too much. Few things look worse than for a speaker to be surprised by what slide comes up next. Make sure all your slides are properly loaded in the tray. The only way to do this is by actually projecting them in advance. Carry your slides with you (never in checked luggage) and keep them loaded in a carousel tray.

• Organization, simplicity, clarity, and legibility are the key elements to a good slide show.

• Beware of Murphy's Laws.

--George Bryce,
Dept. of Psychology

INSTRUCTIONAL MEDIA

Instructional Media Services --10962 Le Conte Ave., Saken Bldg, 825-7771

This division's media Production unit includes all personnel and equipment necessary to design and produce audio tapes and cassettes, slide/tape presentations and assorted program materials.

Classroom Audio Visual Services --15 Powell Library, 206-6551

Provides media equipment and trained operators for film and slide projection, P.A. systems and classroom audio recordings, closed circuit television playbacks and simple video records (U-Matic cassettes).

Ordering Instructional Media:

Please order 7-10 days in advance.

• If you require a videotape playback in the classroom, A.V.S. will supply the equipment and the operator.

• Other video tape equipment such as a 16mm film projector, a microphone, or cords are only available for classroom use (allowance is made for setting up and breaking down time).

• Have your Department Administrative Assistant place the order. When placing an order have the following

information ready with your request:

Course number
Room location
Class time

- Equipment may be obtained in several ways:

Picked up from A.V.S. by you
Delivered to the classroom by A.V.S. personnel
Delivered and set up by A.V.S.
Delivered, set up, and operated by A.V.S.

- Equipment will come with basic accessories in a kit:

16 mm Projectors come with:
Reel box with 800' and 1600' reels
Spare lamp and cheesecloth for changing lamp

Slide Projectors come with:
Carousel tray that holds 80 slides
Remote control with 8' cord
Zoom lens 4"-6"
Spare lamp and cheesecloth

Overhead Projectors come with:
Acetate (clear plastic) roll
pen

- When placing your order, check which equipment is included in the specified kit and which equipment must be ordered separately.

- To receive instruction on operating the Instructional Media equipment, please call x61849 for an appointment.

The Instructional Media Library -- 46 Powell Library, 825-0755

The Instructional Media Library maintains a large collection of educational films, videotapes and slide/tape modules. The library provides free loans of its materials to regularly scheduled UCLA classes, and rentals to campus organizations. Also, reference books and catalogs from educational and feature film distributors are available. The library staff will assist in researching films and videos on any subject, and can arrange rentals from outside sources. To order materials or to reserve preview facilities call x50755.

Mon. - Thurs.	8 am - 10 pm
Fri.	8 am - 6 pm
Sat.	10 am - 6 pm
Sun.	12 noon - 6 pm

Multi-Media Learning Laboratory --290 Powell Library, 206-1211

The Multi-Media Learning Laboratory (MMLL) provides access to course-related audio visual materials and support equipment, enabling faculty to incorporate media into the curriculum without using limited classroom hours. It offers students an opportunity to learn at their own pace, and the flexibility of studying at times convenient to their individual schedules.

Instructors teaching

regular scheduled UCLA classes may assign students to independent study of materials from the collection, or they may place specially prepared lessons such as lectures and demonstrations on reserve for students in their classes. Materials in the collection are generally restricted to on-site use, but faculty can make special arrangements for classroom presentations through the Instructional Media Library. Facilities for group viewing are available by appointment.

Photographic Services -- 62-073 CHS, 825-7725, Carolyn Castelli, Supervisor

Both standard and specialized scientific photographic services are available to serve instructional and research needs. Services include:

- Photographic consultation on technical procedures.
- Photomicrography, macro-photography, and scientific photography.
- Computer enhancement of radiographs, photomicrographs, etc.
- Black and white, diazo and color slide reproductions from camera ready originals or book copy.
- Ektachrome slide processing on a one-day delivery basis.
- Preoperative, operative, postoperative surgical photography.
- Patient documentation.
- Portraits, passports, and tabletop illustrations.
- Public relations assignments, location shooting and research and laboratory services.
- Direct positive processing and slide duplication.
- High quality black and white and color print production.

Photographic Services is located next to, and works in conjunction with the Medical Illustration and Graphs unit, to provide a total system of service for the development of specialized research and instructional materials. Services of the Photographic unit are offered on a recharge or cash basis.

PROBLEM AREAS AND POSSIBLE SOLUTIONS

Approximately 15% of UCLA's TAs are foreign students. Many of them are new to the American university system; some are also new to the verbal and non-verbal demands of an American classroom.

Most of the problems TAs experience when they begin to teach are common to both foreign and American TAs. There are, however, problems that foreign TAs, especially non-native speakers of English, share among themselves. The University and the Office of Instructional Development are working out programs to help these TAs adjust to their duties as TAs at UCLA.

THE FOREIGN STUDENT AS TEACHING ASSISTANT

Cultural differences in teaching methods and appropriate conduct for students and teachers create challenges for the foreign student TA beyond those encountered by the American TA. In all countries teachers are respected as authority figures, but the way an authority figure behaves is different from country to country. At UCLA, teachers expect more independent work from students than do teachers in many other cultures. There is a difference in emphasis on how much teachers tell their students and how much they encourage students to discover and learn on their own. This affects the kind of homework, the type and extent of classroom discussion, and the style of papers and examinations that teachers and students expect. Reconciling these expectations with experiences at home is an example of an additional challenge faced by the foreign student as TA.

Teacher and student behavior in the classroom is also culturally influenced. There are subtle distinctions in the form and quality of posture and body movements, spacing and timing, eye contact, smile and head nod. If all teachers in your country sit tall and straight behind their desks, without looking, smiling, or nodding at individual students, you will tend to do the same. Whether you look or smile at your students while teaching, use few or many gestures, stand or sit behind a podium or desk affects how your students perceive you as a teacher and how effectively they learn. We tend to ignore these aspects of teaching as they are learned in infancy and have become an integral part of our behavior. We overlook how profoundly these actions affect our liking and respect for one another and influence the quality and quantity of teaching and learning that occurs in the classroom.

The Office of International Students and Scholars can train foreign students to become more aware of the cultural differences in teaching styles and non-verbal behavior. It can teach them how to observe their classes and themselves more

effectively and provide them with the opportunity to practice different teaching styles and behaviors. The Office of International Students and Scholars is located in a temporary structure in Lot 9A, ext. 51681.

ENGLISH 34

UCLA offers a special course designed for teaching assistants who are not native spakers of English. This course, English 34 (Oral Communication for Foreign Students), is offered two or three times a year. Enrollment priority is given to TAs and future TAs (for example, recipients of Regents Fellowships, who will teach during their second and third years of graduate school).

The purpose of this course is to give foreign teaching assistants guided practice (with feedback) on making academic presentations. The class size is kept small (approximately fifteen students each quarter) so participants will have opportunities to improve their spoken English. Class activities include leading discussions on textbook chapters, speaking extemporaneously, using idioms and colloquial English, giving lessons on topics from the major field, answering questions from the audience, giving impromptu speeches, and participating in panel discussions or debates. Several class activities are videotaped so the participants can critique their own performances, as well as receive suggestions from the instructor.

English 34 is an advanced oral communication course -- not simply a conversation group. Participants are expected to attend every class and give a number of prepared presentations during the quarter. The class meets twice a week for two hours each session (a total of forty hours in the quarter). It is a four-unit course which is graded on a satisfactory/ unsatisfactory basis. The prerequisites for enrolling are successful completion of English 33C or exemption on the English as a Second Language Placement Exam (ESLPE). For more information about English 34, please call ext. 54378.

PROBLEM SOLVING

Virtually every TA on campus deals with some type of "problem solving" in everyday class situations. Problems come in many shapes and sizes. They can be mathematical, social, or moral; they can affect the world, a select group, or an individual. TAs deal with a wide variety of situations, subjects, and attitudes in their classrooms. The problems to be solved within this complex are diverse and require skillful use of appropriate problem solving techniques. The following notes are offered to help identify a number of these methods of problem solving.

HOW TO SOLVE IT*

First: You have to understand.

Understanding the Problem: What is the unknown? What are the data? How are they related? What is the relationship? What is the concept, theory, or idea behind the problem? Is it possible to satisfy the relationship? Is the relationship sufficient to determine the unknown? Or insufficient? Or redundant? Or contradictory? Draw a figure. Introduce suitable notation. Separate the various parts of the relationship. Relate them to the concept(s).

Second: Find the connection between the data and the unknown. You may be obliged to consider auxiliary problems if an immediate connection cannot be found. You should obtain eventually a plan of the solution.

Devising a plan: Have you seen a problem related to this concept before? Have you seen it in a slightly different form? Do you know a related problem? Do you know a formula, related to this concept, that could be useful? Look at the unknown! Try to think of a familiar problem having the same or similar unknown. Here is the problem related to yours and solved before. Could you use it? Could you use its results? Could you use its method? Should you introduce some auxiliary element in order to make its use possible? Have you thought of all possible variants of the concept to which your problem is related? Could you restate the problem? Could you restate it differently? Go back to definitions. Review the concept. How are the variables related to the concept? How do the variables relate to your data and the unknown in your problem? Re-read the problem carefully. Have you read something in that is not there? Have you skipped something that is? If you cannot solve the proposed problem try to solve first some related problem. Could you imagine a more accessible related problem? A more general problem? A more special problem? An analogous problem? Could you solve part of the problem? Keep only part of the relationship, drop the other part; how far is the unknown then determined? How can it vary? Could you derive something useful from the data? Could you think of other data appropriate to determine the unknown? Could you change the unknown or the data, or both if necessary, so that the new unknown and the new data are nearer to each other? Did you use all the data? Did you use the whole relationship? Have you taken into account all the essential notions involved in the problem and in the concept related to the problem?

Third: Carry out your plan.

Carrying out the plan: Carrying out your plan of solution, be sure to check each step. Is the arithmetic correct? The algebra? Is each step clearly correct? Can you prove it is? Are the dimensions correct?

Fourth: Examine the solution that you obtained.

Looking back: Can you check the argument? Does the answer make sense, is it reasonable? Can you derive the result differently? Can you now see it at a glance? Does the result validate your idea of the concept which the problem is related to? Can you use the result or the method for some other problem?

*Adapted from How to Solve It by George Polya.

PROBLEM SOLVING

Tactic	Description	Overt Outcome
clarifying	reread problem; analyze givens; make tacit assumptions explicit	restatement of problem, givens, assumptions; understand the problem
planning	outline plan; clarify goal/subgoal	direction-oriented statements
visualizing	sketch diagram; construct model	diagram; model; schematic
analogy	recall similar problem/ method/result, useful theorem/techniques	applicable problem, theoretical method, result; solve simpler related problem
identifying	identify concept behind problem type of problem, section of book from which problem taken	knowledge of ideas involved in the problem
deduction	draw inferences (forward/backward); produce goal-directed information	conclusions
trial and error	hit-and-miss attempt; try special cases without reference to pattern search	corrective feedback
induction	systematic pattern search; testing special cases	generalizations
equations	algebraic model; symbolic, equational, relational	algebraic expressions, statements
retrospection	look back; check; verify; suggest alternate solution, modification, extension; is the solution reasonable?	verification; extension
classifying	group or classify data	table or chart

questioning	identify what you need to know to be able to solve problem	question or problem requiring the answer
unit analysis	compare units of goal (outcome) with units of givens	list of specific units

HELPING STUDENTS SOLVE PROBLEMS: ADVICE AND REFERRALS

Students talk to TAs for a variety of reasons: to ask for help with a specific question about a course, to seek advice on academic difficulties at the University in general, or to discuss personal problems when the student doesn't know where else to go for help. Because these situations can and do occur, it is important for the TA to have a basic understanding of counseling and advising techniques, as well as a general overview of University services to which students can be referred for more specific attention.

The following section presents suggestions for dealing with students generally in a one-to-one situation, and for offering concrete suggestions in specific situations. It is by no means exhaustive and has certainly not anticipated every question and situation a TA can be confronted with. It should function as a beginning guide for a TA who needs to know the University community's offerings for the student with particular problems and concerns.

ADVISING AND COUNSELING STUDENTS

What follows is a review of some of the basic ingredients that make up a healthy, constructive advising/conferring session with a student.

Climate: A number of factors, taken together, create the atmosphere or climate for relaxed and constructive communication with students. You should appear to be approachable and willing to help. Many students have reported that they hate to intrude with their problems when they feel that the teacher may be involved in something "important." It doesn't take much to make many students feel unwelcome or to scare them away. A pleasant, accepting personal style encourages communication. Other factors such as the way your office is arranged can help create a climate where communication is easy.

Rapport: Even a minute or two of small talk about almost any everyday subject of mutual interest helps to establish a communicative relationship and set a positive tone. A bit of small talk permits both parties to adjust to each other, show their humanness, and dispel some of the awkwardness or uneasiness that may exist.

The Subject: In general, you should encourage the student to state why he/she has come to see you. Maybe you have a good hunch, but it is generally better to hear the issue or problem in the student's own words. In some cases, if you state the problem, you may be off-base or you may contaminate what the student wants to say.

Attention and Listening: It is important to give the student your undivided attention. If you are (or appear to be) preoccupied with a

letter you are reading, papers you've had to stop grading, etc., you are most likely sending a message which will not encourage communication. Listening is crucial. Too often people only half-listen to each other, and they miss important things the other person is saying. In spite of the fact that most of us know better and tend to resent it when others don't listen to us, we often don't listen to others as closely as we might. Numerous informal surveys of students indicate that they especially value having a teacher listen to them.

Questioning: Asking good questions is a real skill. Among other things, it's a way of showing the other person that you have been listening. It is also a way of learning more about the subject or problem, of clarifying issues and, occasionally, of helping the student find his/her own answers. Questions can be thought of as ranging on a continuum from "closed" to "open." Closed questions are focused and specific, calling for short answers (e.g. "Do you find this problem difficulty?"; "Are you a Zoology major?"). At the other extreme, open questions do not specify a short, prescribed reply; rather, they encourage people to respond mostly on their own terms (e.g. "How do you feel about the difficulty of this problem?"; "What concerns do you have about being a Zoology major?").

When you advise or confer with a student, you may not be able to provide the answers or information that seem to be needed. Sometimes this can be frustrating, especially if the advising role is a relatively new one for you and you would like to be able to "say the right things." Even the most seasoned advisor gets satisfaction out of being able to help a student, and probably suffers some feeling of inadequacy when it appears that the student's needs haven't been met. There doesn't seem to be much solace in the truth that no one can have all the answers.

Sometimes if you can't help a student, you might be able to suggest someone who can. There are numerous occasions when you are not the best qualified person to see for the needed information or advice but the student doesn't know who is; the student is not helped by bad or misleading advice. You should strive to gain sensitivity both to the student's needs and your own capacity to be helpful. Students won't expect miracles from you and neither should you expect them from yourself. Surprisingly often, students will settle for your attention, acceptance and understanding and not be disappointed by your lack of expertise.

HOW TO HANDLE THE RED TAPE OF MURPHY HALL

Registering and Enrolling: Registrar's Office, 1134 Murphy Hall, 825-1091, Monday through Friday 8 am to 5 pm.

Registration involves the

payment of fees and can be handled by mail or in person before classes begin.

Enrollment entails signing up for classes; if not done by mail, this can be handled in person at the computer terminal through the tenth day of classes.

Both Registration and Enrollment require the completing and filing of various informational forms; failure to do so before the deadlines may delay or even prevent a student from receiving credit for work undertaken. If students are having difficulty with registering, they should contact either the Registrar's Office or their college counselor.

Transferring of credit: Admissions Office, 1147 Murphy Hall, 206-8341, Monday through Friday 8 am to 5 pm.

Besides being responsible for determining admission eligibility for entering students, the Admissions Office evaluates transcripts for transfer credit from other institutions and assigns equivalent course credit for continuing and returning students. Any student who has taken courses at other colleges or universities should be aware that these courses will not automatically be transferred to UCLA.

Withdrawing from School: See college or school counselor.

A student faced with difficulties of any kind which seriously interfere with his or her studies may consider withdrawing from the University. Students withdrawing from the University within the course of a quarter must file an acceptable Notice of Withdrawal with their college or school. If this is not done, the student will be faced with non-passing grades in all courses and will jeopardize his or her eligibility for readmission to the University of California or for transfer to another institution.

Passing/Not Passing Grading: See college or school counselor.

A student signed up P/NP in a course must receive a "C" or better to "pass" and to receive units and course credit. No units or course credit will be given for a "NP" (a C- or below). A Student's GPA is not affected by a P/NP grade; however, some graduate schools will consider "P" grades as a "C" in their evaluation of transcripts and applications.

Changing of Credit Detail: See college or school counselor.

An undergraduate student may change from a P/NP to a letter grade or vice versa up to the sixth week of school, though there is a $3.00 fee after the second week.

Adding Classes:

Undergraduate students may add classes in the first two weeks of the quarter at the

computer in Ackerman Union, without paying a fee. Undergraduate students adding classes in the third or fourth weeks of the quarter must obtain a petition from their respective colleges and their instructor's signature on the petition or a Permission to Enroll slip. They must also pay a $3.00 fee.

Dropping Classes:

Undergraduate students may drop classes in the first two weeks of the quarter at the computer in Ackerman Union, without paying a fee. Undergraduate students may drop a class up to the fourth week of the quarter but they must complete a petition from their college and pay a $3.00 fee after the first two weeks.

If an undergraduate student adds a class after the fourth week or drops a class after the sixth week, approval of his or her college is required as well as a $13.00 fee.

Paying for an Education: Financial Aid Office, Window B A107 Murphy Hall, 206-0400, Monday through Friday, 8:30 am to 5 pm; By appointment 9 am to 5 pm.

The Financial Aid Office administers undergraduate scholarships and all graduate and undergraduate financial aid that is based on financial need. This office deals with Scholarships, Grants, Work-Study, and Loans.

WHERE TO GET ACADEMIC ADVICE

General and Specific Academic Counseling:

Counseling Assistant Program -- A316 Murphy Hall, 206-6681

The Counseling Assistant staff of the College of Letters and Science provides special support for entering students. The Counseling Assistants (CAs), who are graduates from many different academic disciplines, are trained to counsel, advise, and make informed referrals; they work closely with full-time academic counselors of the College to provide a wide range of academic support to undergraduates. By meeting regularly with the CAs, students who participate in the program enhance their chances of academic success.

CAs are selected from the graduate students of participating academic departments and work both in the College Counseling Service and their home departments. Duties within departments vary but are generally supplementary to the academic advisers' role. TAs may wish to consult with CAs to determine the availability of additional services within departments.

Advising and Counseling on Campus: There are many types of advising and counseling on campus and each serves a different function. The following services are provided:

The college or school staff answers questions at the

"information" window and gives information about various petitions, filing procedures, and deadlines.

The college or school counselors help students explore choices of a major and can show how college/school or university academic regulations apply to an individual situation.

Departmental counselors provide information about the courses within their departments, as well as departmental and major requirements. They may also be of help in finding research, study, and job opportunities.

Faculty advisers can advise on questions pertaining to the major and courses applicable to the major, graduate schools, and/or further study and research projects.

Academic Student Counselors (ASK) who advise about academic procedures and general program planning provide referral to various student services on campus.

Practical Academic Assistance:

Composition Tutoring Lab - 339 Kinsey Hall, 206-1491

Sponsored by UCLA Writing Programs and supervised by ARC, the Composition Tutoring Lab helps students individually with their writing problems. Designed primarily to support the basic composition courses, English A and English 3, the Lab can also assist students with writing assignments for other courses. Non-native speakers of English find the Lab a particularly valuable resource.

The undergraduate peer tutors can help students understand and profit from the corrections you make on their papers and essay exams. The tutors can also guide students in generating and organizing material and revising rough drafts. This process could lighten your task as a reader. For more information, contact Dr. Judith Collas, Composition Tutoring Lab Supervisor.

ESL Tutoring Lab -- 339 Kinsey Hall, 206-1211

Through individual and group tutorials, the ESL Tutoring Lab provides non-native speakers with help in improving grammar, compositionn skills, pronunciation, and listening comprehension. For more information, contact Ed Frankel, 206-1211.

ARC Math/Scieince Tutorial Center -- 3973 Math Sciences, 206-6965

Staffed by upper division undergraduate and graduate students, the Math/Science Tutorials provide group appointment tutorials for students wishing to improve their performance in selected lower division mathematics, chemistry, physics, and biology courses. Students requesting a tutor must register in person. Registration begins on the first day of class and runs through the end of the third week of class. Registration hours are

between 10:00 am and 2:00 pm daily in Math Sciences 3970. A drop-in laboratory for brief math questions is also available from 11:00 am to 2:00 pm, Monday through Thursday. For more information, call 206-6965.

Language Laboratory -- 190 Powell Library, 206-8855

Students enrolled in ESL and foreign language classes are assigned by faculty to practice pronunciation and comprehension skills in the laboratory. Audio tape programs which accompany specific texts used in classes, and listening, recording and monitoring equipment are available for students who wish to supplement and enrich their learning of a language. Tapes must be used in the laboratory, but no restrictions are placed on the number of uses or length of time students spend in the laboratory practicing language skills.

Finding Jobs or Careers: Placement and Career Planning Center, 825-2891, Monday through Friday 8 am to 5 pm (except Tues., 8 am to 7 pm)

The Placement and Career Planning Center offers career development and placement services to students of all disciplines and all degree and class levels. Experienced career counselors can help students locate the most current and accurate career information, assist students with the decision of whether or not to attend graduate school, and inform students of current and projected labor market needs and demands.

The Career Resources Library Service provides general career information; employment, professional, and graduate school catalogs; certain pertinent periodicals and other items intended to assist with career decision-making.

The Campus Interview Program brings representatives of a large number of employers, graduate schools, and professional schools to discuss career opportunities and career related summer employment and to recruit prospective graduate students.

The Student Job Information Services provides a job listing and referral system for currently enrolled students and their spouses who are seeking various types of employment.

Field Studies--Relating Theory to Practice -- 70 Powell Library, Monday through Friday 8 am - 5 pm, 825-7867

Departmental Field Studies Development Program -- The goal of this program is to encourage the development of field study or academic internship programs within academic departments. Departmental coordinators work with students in developing field projects and in finding placements and academic sponsorship. Currently, there are special coordinators for Anthropology, Business Administration, Communication Studies,

English, Geography, History, Kinesiology, Psychology, Sociology, and Women's Studies.

Independent Field Studies -- Students may individually design internships and field study opportunities to meet their specific academic, personal and career interests. A field studies coordinator works with the student on a one-to-one basis and helps broker credit for appropriate learning gains from the field experience.

Special Programs -- Field Studies Development collaborates with other campus units and community agencies in piloting and administering special programs which use community resources as a vehicle for learning. These programs may be extramurally funded. Currently two such programs are in operation--the Developmental Immersion Program (DDIP, 825-7867) and the Applied Humanities and Chicano Studies Program (825-2363).

Getting Something Done About a Grievance: Don Hartsock, Ombudsman, 274 Kinsey Hall, 825-7627, Monday through Friday 8 am to 5 pm.

The Ombudsman seeks to resolve personal grievances of members of the university community emerging from policies, practices, or personalities. As an independent agent with investigatory powers, the Ombudsman accepts grievances only after the grievant has tried to resolve the problem through regular channels and when there is evidence that decisions have been made on questionable grounds.

Changing Bad Study Habits: Psychological and Counseling Service, 4223 Math Scieinces, 825-4207, Monday through Friday 8 am to 5 pm.

The behavioral division of Psychological and Counseling Service deals with students who want help in carrying out changes that they would like to see in themselves -- changes in their use of time, changes in their emotional responses to various situations, changes in unwanted habits, or in thought patterns or perspectives. Specifically, this service attempts to help students overcome test anxiety, writing blocks, fear of oral exams or participating in classroom discussions, and procrastination in studying.

Using a Library:

Virtually all of the libraries on campus are available to help individual students, entire classes and TAs in the use of the library, research procedures, etc. Group sessions should be arranged with the library a week to two weeks in advance so that the sessions can be designed (either in the class or in the library itself) to serve the specific needs of the students. For more information, call the specific library you are interested in.

University Research Library:
Janet Ziegler, 825-1693
Chemistry Library:
Marion Peters, 825-3254

Art Library:
Joyce Ludmer, 825-3817
College Library:
Tom Fry, 825-4134
Education and Psychology Library:
Joan Kaplowitz, 825-4081
Physics Library:
Wally Pegram, 825-4792
Geology Library:
825-1055
Biomed Library:
Julie Kwan, 206-8016

WHERE TO GO TO SOLVE PERSONAL PROBLEMS

Health Services: Student Health Services, 825-4073, A2-130 Center for Health Sciences, Monday through Friday, 8 am to 11:30 am, 1 pm to 4:30 pm, Tuesdays open at 9 am, Emergencies only between 11:30 and 1.

Payment of full registration fees entitles students to use the campus Student Health Service during each fully registered quarter or semester. Benefits include outpatient care for general, and some specialized medical and surgical conditions, gynecological and family planning services, some dental care, laboratory, X-ray, and pharmacy services. Most benefits are provided without additional charge; service charges, when applicable, are moderate. For information call 825-4073.

A variety of health promotional and illness prevention services are offered by student health counselors. Prevention programs include: cold clinic, nutrition clinic, weight management series, health risk appraisals, stress management, fitness testing, substance use/abuse, suicide prevention education, and contraceptive counseling. The peer health counselors provide services campuswide; for information call 825-8462. Student Health Advocates are available in the residence halls and other on-campus living situations; for information call 206-9984.

Student Psychological Services: A-3-062 Center for Health Sciences, 825-7985, 4223 Math Sciences, 835-0768/825-4207

Student Psychological Services (SPS) is the home of the merged services of Psychological and Counseling Services and the Student Mental Health Service, who are temporarily in two locations: the South Campus office is located at A-3-062 Center for Health Sciences, 825-7985, and the Mid-Campus office is located at 4223 Math Sciences, 825-0768/825-4207. All inquiries regarding services, policies, and programs for students are welcome at either of these locations.

Student Psychological Services offer a variety of psychological help to students. The staff of psychologists, clinical social workers and psychiatrists provide assistance with situational stresses, such as school relationship problems, coping with emotions, school pressures, difficulties with decisions, values clarification, family conflicts, career goals, and other

concerns affecting personal growth. SPS also offers counseling to increase effectiveness in handling specific problems. Typical concerns which can be resolved through a self-management learning process include overcoming test-taking anxiety, tenseness or difficulty in self-expression, procrastinating in studying, anxiety in meeting people, learning to express oneself more directly and honestly in interpersonal relationships, and finding a way to increase self-confidence and self-control.

Treatment is primarily through individual psychotherapy, but might include couples counseling, group psychotherapy, behavior modification, hypnotherapy, biofeedback, or medication.

The service also provides professional consultation in assisting University offices and departments develop and carry out services, policies, and programs for students.

The service is free and confidential to regularly enrolled students. We are happy to be of service to you at either of our locations listed above.

Taking Care of Children:

This covers a day care center and schools for children.

The Child Care Center at 10833 Le Conte (825-5086), provides part-time and full-time care depending on the needs of the parents, for children from two months to six years.

The Family Day Care Program also at 10833 Le Conte (825-8474), provides homes in the community which are licensed by L.A. County. Full and part-time care are available.

The UCLA Parent Toddler School at 3327 Sepulveda (391-9455), is a cooperative preschool open to all members of the UCLA community and is offered for children from 18 months to three years.

The University Parents Cooperative Nursery School also at 3327 Sepulveda (397-2735), is for children from three to six years of age.

Calling for Help: Helpline, Sunday through Thursday 6 pm to 12 pm, Friday and Saturday 6 pm to 1 am, 825-4357.

The Helpline provides the campus community with information, referrals, crisis intervention, and a friendly ear to talk to when the rest of the campus is closed.

Handling Legal Problems: Student Legal Service, 825-9895, 70 Dodd Hall, Monday through Friday 9 am to 12:30 pm.

The Student Legal Service offers legal counseling and assistance without charge to regularly enrolled UCLA students. The office provides assistance in dealing with a variety of problems, including landlord/tenant relations, domestic relations, consumer problems, accident and injury

problems, criminal matters, and contract and debt problems. All matters are handled confidentially.

Getting Involved in Student Government: 3rd & 4th floors, Kerckhoff Hall

Undergraduate Student Government offers undergraduate students the opportunity to get involved with the University. Through the various commissions in the Undergraduate Students Association Council a student can volunteer to work in national, state, or local lobby; or in a community service program; or with campus educational policies; or even with arranging major campus activities.

The elected students appoint part-time student program directors to administer the major programs and coordinate student volunteers.

Besides working in the commissions, there are also campuswide committees which take up less time than work in a commission. These committee positions give the students an opportunity to meet and work with UCLA faculty and staff on a personal level.